Title

Strategic Evaluation of Advanced Engineering Systems and Pedagogical Innovation: A Professional Audit of Dr. Tshingombe Fiston Tshitadi

Overview

Dr. Tshitadi's career integrates **electrical engineering**, **security systems**, and **education policy**, with a focus on 4IR readiness, curriculum innovation, and traceable compliance systems that support socio-economic development.

Scope

- **Engineering Systems:** AC/DC theory, transformers, motors, PLCs, SCADA.
- **Security Engineering:** Access control, forensic policing logic, infrastructure integrity.
- **Education Policy:** SAQA/DHET frameworks, NATED pathways, curriculum compliance.
- **Socio-Economic Development:** Parliamentary submissions, rural energy research, youth mentorship.

Abstract

A concise audit of a trajectory from TVET foundations to doctoral systems research. Emphasis on automation, nanotechnology, AI integration, and low-code solutions (VBA UserForms) that enable signal-driven, audit-ready technical education and resilient industrial practice.

Description

- **Academic Path:** NATED N1–N3 (St Peace College) → Master's & Doctorate (Atlantic International University).
- **Technical Competence:** Power systems, motor control, PLC/SCADA, diagnostic engines, DLT for secure records.
- **Research Contributions:** Modular learning signals; autodidactic "Copilote" methodology; innovation & discovery record keeping.
- **Policy Engagement:** Submissions to South African parliamentary portfolio committees on higher education, energy, and rural development.

Keywords

Engineering Systems • Security Integrity • Curriculum Policy • 4IR • PLC • SCADA • VBA • Logigram • Nanotechnology • AI • DLT • Compliance • Audit • Socio-Economic Development

Statement — Delivery Management System

A decentralized ecosystem using **VBA UserForms** and logigram logic to manage: student registration and transcripts; engineering diagnostics and trade readiness simulations; inventory and financial compliance; automated audit sheets and bilingual credential exports.

Information & Communication Skills

- **Technical translation:** Convert engineering detail into policy and compliance language.
- **Academic writing:** Thesis, research papers, portfolios of evidence.
- **Stakeholder engagement:** Parliamentary submissions, institutional correspondence, moderation templates.

Administration & Investigation

- **Administration:** Credential mapping, version control, inventory tracking.
- **Investigation:** Forensic policing logic, CCMA/Labour Court processes, complaint tracking.
- **Governance:** Tender documentation, bid compliance, socio-economic advocacy.

Advantages & Disadvantages

Advantages: modular, audit-ready frameworks; scalable low-code tools; integration of AI and nanotech for resilience. **Disadvantages:** cross-domain complexity; interoperability and standards alignment challenges; need for stronger data governance.

Data Analysis & Visual Basic Logigram

- **Data models:** Complaint → Ruling → Rehabilitation; Credential → Export → Audit.
- **Logigram logic:** Star-Delta motor startup flows, ATM simulation, PLC diagnostics, curriculum signal mapping.
- **Automation:** VBA diagnostic engines, compliance audits, curriculum dashboards and export routines.

Audit Conclusion

The portfolio demonstrates a coherent systems approach linking engineering practice to policy impact. To scale impact, prioritize **standardized schemas**, formal **data governance**, and interoperable interfaces across SAQA/DHET/QCTO and industry partners.

Bibliography (Selected Works)

- *Application Trade Discovery: Job Education Research Methodology, Operational Autodidactic Copilote Distance* (F1000Research, 2025).
- *Career Drawing Total Programming: Analysis, Design, Investigation* (F1000Research, 2025).
- Parliamentary submissions to South African Portfolio Committees (Higher Education, Mineral Resources, Agriculture, 2023).

- Thesis: *Rural Energy, Integrity Science, and Educational Frameworks* (Atlantic International University).
- Technical portfolios: VBA UserForms for diagnostics, compliance, and curriculum management.

I can convert this profile into a polished infographic- style HTML report with interactive charts and a timeline using the thematic percentages and competency matrix already outlined; reply **Yes** to proceed or specify any data points you want included.

Career Education Didactic Report

Author: Tshingombe Tshitadi Theme: Curriculum Assessment in Trade & Engineering Education

🕮 Overview

This report examines the integration of career education materials, award certificates, diplomas, prizes, and innovative didactic systems within trade and engineering education. It emphasizes curriculum assessment, learner evaluation, and audit-ready documentation.

📚 Scope

- Trade and engineering education at advanced levels
- Credentialing systems: certificates, diplomas, prizes
- Didactic materials: quizzes, evaluation rubrics, learner dashboards
- Innovation and invention recognition in wholesaler and technical contexts

📝 Abstract

Career education thrives when didactic rigor, credentialing, and innovation are combined. This report explores curriculum assessment frameworks, management systems, and audit principles to ensure transparent learner recognition and sustainable educational reform.

🎯 Purpose

- To evaluate career education materials and credentialing systems
- To design audit-ready certificates and diplomas
- To integrate innovation and invention into trade wholesaler education
- To establish transparent quiz and mark evaluation systems

Keywords

Career education, didactic report, award certificate, diploma, prize, innovation, invention, trade engineering, wholesaler, quiz, evaluation, curriculum assessment, audit, management system.

Description

The report describes how career education materials can be structured into audit-ready frameworks, ensuring learners receive visible recognition through certificates, diplomas, and prizes. It highlights innovation in trade engineering and wholesaler systems.

⚠ Problematic

- Lack of standardized credentialing across trade education
- Limited recognition of innovation and invention in curricula
- Inconsistent evaluation methods and mark allocation
- Weak audit systems for compliance and transparency

Statement Report

This report asserts that career education must integrate didactic rigor, credentialing, and innovation recognition to empower learners and align with regulatory frameworks.

Management System Information

- Learner dashboards for progress tracking
- Digital credentialing systems (badges, certificates, transcripts)
- Audit-ready documentation aligned with councils and authorities

Principle Investigation

- Alignment of curriculum with regulatory standards
- Evaluation of innovation in trade wholesaler education
- Transparency in quiz and mark evaluation systems

Method Research

- Comparative analysis of credentialing frameworks
- Case studies of trade engineering education
- Surveys of learner and educator experiences
- Audit of management systems for compliance

✓ Advantages

- Transparent credentialing and recognition
- Motivation through prizes and innovation awards
- Audit-ready documentation for compliance
- Learner empowerment via gamified dashboards

✗ Disadvantages

- High administrative burden for audit systems
- Risk of over-standardization limiting creativity
- Resource-intensive management systems

Management System Information (Expanded)

- Integration of LMS with credentialing dashboards
- Automated quiz banks and evaluation rubrics
- Secure audit trails for certificates and diplomas

Conclusion

Career education in trade and engineering requires a balance of didactic rigor, credentialing, and innovation recognition. Audit-ready systems ensure transparency, while prizes and certificates motivate learners to achieve and invent.

Audit

- Verification of certificate and diploma authenticity
- Compliance with national and international councils
- Continuous monitoring of learner progress and evaluation systems

Bibliographic (Sample References)

- Council on Higher Education (CHE) guidelines
- Engineering Council of South Africa (ECSA) standards
- UNESCO TVET frameworks
- International Journal of Technical Education & Training

This structure gives you a **complete academic-style report** that can be adapted into curriculum assessment documentation, certificate design, or audit frameworks.

Would you like me to **expand this into a polished certificate/diploma template** (with placeholders for learner details, marks, and achievements), or into a **sample quiz bank with**

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Based on 49 sources

Position	Created	Reference Number (Inferred)	Entity/Department	Location	Application Status (Inferred)	Source
Technical Official PPM Mechanical X2 (Distribution) EAL Midrand	2024/09/01 01:27 PM	EMTOPPMT06	Distribution	Midrand, South Africa (Gauteng)	Submitted	[1], [2]
1 Learning-Programme-Engineer-in-Training-x-2, Generation, Megawatt Park	2024/09/01 01:29 PM	EIT X2/GX PrimaryE/MC	Generation, Megawatt Park	Megawatt Park, South Africa (Gauteng)	Submitted	[1], [2]
Learning Programme Engineer in Trainng x17 GX Matla Power Station	2024/09/01 01:30 PM	GXMATL- EIT/2024	Generation, Matla Power Station	Matla Power Station, South Africa (Mpumalanga)	Submitted	[1], [2]
Manager Site Outage Execution, Generation, Tutuka Power Station	2024/09/01 01:31 PM	50515483LM	Generation, Tutuka Power Station	Tutuka Power Station, South Africa (Mpumalanga)	Submitted	[1], [2]
Re Advert Snr Technologist Electrical Engineering Substation x2 (National Transmission Compa	2024/09/01 01:31 PM	50813227NLee01	National Transmission Company South Africa	South Africa (Gauteng)	Submitted	[1], [2]
Senior Technician Chemistry x2 (Technical Support and	2024/09/01 01:32 PM	50861481SN/GX-Koeberg	Technical Support and Oils Micro, Generation, Koeberg Power Station	Koeberg Power Station, South Africa	Submitted	[1], [2]

Oils Micro) (Generation) Koeberg				(Western Cape)		
Officer Safety Health Environment X1 Generation Medupi Power Station	2024/09/01 01:33 PM	GXMedOMM04	Generation, Medupi Power Station	Medupi Power Station, South Africa (Limpopo)	Submitted	[1], [2]
Learning Programme Outages x1 - Graduate in Training , Generation, Megawat	2024/09/01 01:34 PM	Learners OGE Contracts Management	Generation, Megawatt Park	Megawatt Park, South Africa (Gauteng) and Witbank	Submitted	[1], [2]
Learning Programme - Graduate in Training- Quantity Surveyor, Generation, Megawatt Park	2024/09/01 01:35 PM	Not in source	Generation, Megawatt Park	Megawatt Park, South Africa (Gauteng)	Submitted	[1], [2]
Senior Advisor Supplier Development, Localisation and Industrialisation x2, Generation,	2024/09/01 01:36 PM	Snr Advisor SDL&IPL	Generation, Megawatt Park and Tutuka Power Station	South Africa (Gauteng)	Submitted	[1], [2]
Graduate-in-Training (Finance)	2024/09/01 01:37 PM	DurbanvilleFXGIT2025	Finance Division	Durbanville, South Africa	Submitted	[1], [2]
Re Advert Snr Draughtsperson Draughting Electrical Substation Engineering x3 NTCSA MWP	2024/09/01 01:38 PM	50828254NLee01	NTCSA (National Transmission Company South Africa), MWP	Megawatt Park, South Africa (Gauteng)	Submitted	[1], [2]
Technician-in-Training x2	2024/09/01	PeakingTITDrakensberg2025	Peaking	Drakensberg, South	Submitted	[1], [2]

(1xC+I and 1+Mech)	01:39 PM			Africa (Kwa-Zulu Natal)		
Snr. Supervisor Tech Instrument x 2 (Generation) Tutuka Power Station	2024/09/01 01:39 PM	GX49002630WK/TUT	Generation, Tutuka Power Station	Tutuka Power Station, South Africa (Mpumalanga)	Submitted	[1], [2]
Engineer-in-Training-Control and Instrumentation AND-Auxiliary and Anciliary-(Peaking	2024/09/01 01:40 PM	PeakingLearnersEIT2025	Peaking	South Africa (Durbanville)	Submitted	[1], [2]
Re Advert Senior Technician Configuration X1 (Generation) Medupi Power Station	2024/09/01 01:42 PM	Not in source	Generation	Medupi Power Station	Submitted	[2]
Engineer Prof Eng Quality of Supply (National Transmission Company South Africa) Newscastle	2024/09/01 01:43 PM	50817165NQ	National Transmission Company South Africa	Newcastle, South Africa (Kwa-Zulu Natal)	Submitted	[1], [2]
Learning Programme - Graduate in Training x1, Generation, Megawatt Park	2024/09/01 01:45 PM	Not in source	Generation, Megawatt Park	Megawatt Park, South Africa (Gauteng)	Submitted	[1], [2]
Learning-Programme - Graduate-in-Training-x3,-Generation,-1Megawatt-Par	2024/09/01 01:45 PM	Learners OGE Environmental Management	Generation, Megawatt Park	Megawatt Park, South Africa (Gauteng)	Submitted	[1], [2]

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Learning Programme - Engineer in Training x3 (Generation) Engineering MWP	2024/09/01 01:51 PM	001 EIT	Generation, Engineering MWP	Megawatt Park, South Africa (Gauteng)	Submitted	[1]
Secretary Secretarial (Gx Kriel Power Station)	2024/09/01 01:53 PM	GXKRL-04	Gx Kriel Power Station	Kriel Power Station, South Africa (Mpumalanga)	Submitted	[1]
Graduate in Training (Commercial) x1 (Generation)	2024/09/01 01:55 PM	Graduate in Training-Commercial	Generation	South Africa (Gauteng)	Submitted	[1]

Graduate in Training (Finance) x1 (Generation)	2024/09/01 01:58 PM	Graduate in Training-Finance	Generation	South Africa (Gauteng)	Submitted	[1]
Engineer in Training (Nuclear Engineering) x9-Generation Koeberg NP	2024/09/01 01:58 PM	Engineer-in-Training Nuclear Engineering	Generation, Koeberg Nuclear Power Station	Koeberg, South Africa (Western Cape)	Submitted	[1]
Learning Programme - Engineer in Training x2, Generation, Megawatt Park	2024/09/01 02:00 PM	Learners Gx OMO/SM	Generation, Megawatt Park	Megawatt Park, South Africa (Gauteng)	Submitted	[1]
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Officer Security (National Transmission Company South Africa) Bellville	2024/09/01 02:02 PM	50840435MIR	National Transmission Company South Africa	Bellville, South Africa (Western Cape)	Submitted	[1]
Officer catering (Generation) Arnot Power Station x1	2024/09/01 02:04 PM	Gx Arn NN 23/08/24	Generation, Arnot Power Station	Arnot Power Station, South Africa (Mpumalanga)	Submitted	[1]
Re-Advert: Assistant Officer Security Operations Centre (FINANCE DIVISION) Megawatt Park	2024/09/01 02:05 PM	50842085LRR	Finance Division, Megawatt Park	Megawatt Park, South Africa (Gauteng)	Submitted	[1]
Snr Engineer	2024/05	2024051401NM/DVP	Generation, Duvha	Mpumalan	Submitte	[3]

Prof Electrical	/14 12:00 AM		Power Station, Engineering (Electrical)	ga, South Africa	d	
Engineers in Training X09_ Electrical HC x2_ C and I x3_Mechanical or Chemical x3_Industrial Engineering x1 (Gx Kusile Powe	2024/05/19 09:36 AM	Not in source	Generation	Kusile Power Station	Submitted	[2]
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Middle Manager Nuclear Safety and Assurance (ISED) X1 (Generation) Koeberg NPS	2024/05/19 09:39 AM	Not in source	Generation	Koeberg NPS	Submitted	[2]
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Engineering Prof Civil Auxiliary Plant (Generation) Lethabo Power Station	2024/04/24 12:59 PM	Not in source	Generation	Lethabo Power Station	Submitted	[2]
Artisan Engineering	2024/04/17 12:11	Not in source	City Power Workplace / Generation Power	Johannesburg	Submitted	[3]

	PM		Station			
Engineering Assistant	2024/04/01 09:01 PM	Not in source	Not in source	South Africa	Submitted	[3]
Senior Engineer (Electrical)	2024/03/31 12:17 PM	2023/434	ICT management	South Africa	Delivery Failed - Application does not meet requirements	[3]
Artisan-Electronics CT	2024/02/08 03:49 PM	99	SARB Talent Acquisition (Recruiting Team)	South Africa	Submitted - Successful (Job Offer Extended)	[3]
Senior Manager Contracts Management Finance Megawatt Park (Internal only)	2023/10/27 03:29 PM	Not in source	Finance	Megawatt Park	Submitted	[4]
Technical Career / Apprentice	2023/10/08 08:01 AM	1626485	City Power / Eskom	Johannesburg	Submitted	[5]
Technology Design Engineering, Systems Engineering	2023/09/27 05:21 PM	Not in source	Generation	Johannesburg	Submitted	[6]
CVS Title Government and Education job Engineering College	2023/09/28 04:28 PM	Not in source	Generation	Johannesburg	Submitted	[6]
Security officer guard court labour	2023/07/15 02:57 PM	jr 2462/15	Eskom	Witbank	Submitted	[5]
Engineering	2023/07	Not in source	Eskom	Johannesb	Submitte	[5]

electrical student / apprentice	/14 02:57 PM			urg	d	
Engineering Electrical Assessor Learner	2023/05/04 12:00 AM	Not in source	Generation/Transmission	Johannesburg	Submitted	[6]
Engineering Electrical Visited Work Place Training Experimental	2023/04/23 12:00 AM	Not in source	City Power / Eskom Training Center	Johannesburg (Gauteng)	Submitted	[6]
Inquiry regarding Result Statement/Certificate	2022/11/07 02:13 PM	20191113002	DHET Call Centre	South Africa	Submitted	[7]
Application for diplomat engineering electrical award certificate (Retry)	2022/11/05 08:03 PM	20191113002	DHET (Department of Higher Education and Training)	South Africa	Delivery Failed - Address Not Found	[7], [8]
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Chief Engineer (Electrical)	2019/05/10 12:00 PM	SCM193/2019	SAPS SCM: Programme & Project Management	Persequor Park, Lynnwood, Pretoria	Submitted	[7]
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Uturn Data Solutions Infrastructure Skills Test (AWS/Python API)	2025/03/18 12:00 AM	Uturn Demo	Uturn Data Solutions	Remote/Cloud	Submitted	[9]
Supply Chain Planning Supervisor	2025/02/23 00:00 AM/PM	2025-86558	Not in source	Not in source	Incomplete	[10]
EcoStruxure Automation Expert Regional Consultant	2025/02/16 00:00 AM/PM	2023-55706	Not in source	Not in source	Not Selected	[10]
Senior Power Electronics Architect	2024/11/12 00:00 AM/PM	2024-79405	Not in source	Not in source	Not Selected	[10]
Energy Sourcing Analyst	2024/11/06 00:00 AM/PM	2023-62576	Not in source	Not in source	Not Selected	[10]
Digital Power Inside Sales Manager	2024/10/28 00:00 AM/PM	2024-79748	Not in source	Not in source	Not Selected	[10]
Power Systems Medium Voltage Intern	2024/10/23 00:00 AM/PM	2024-79092	Not in source	Not in source	Not Selected	[10]
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Senior Manager MES & Automation	Not in source	0099L0	Machine Development Centre (MDC) India	IN-Karnataka-Bangalore	Submitted	[10]
Senior Design Engineer-	Not in source	0095Z8	Schneider Electric	Europe & SAM	Not Selected	[10]

Electro Mechanical						
Engineering in Training Control and Instrumentation Configuration	Not in source	Not in source	Eskom (Generation)	Megawatt Park	Submitted	[11]
Assistant Security	Not in source	Not in source	Eskom	Megawatt Park	Submitted	[11]
Programmer Engineering in Training	Not in source	Not in source	Eskom	Not in source	Submitted	[11]
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Senior Technician	Not in source	Not in source	Eskom (Generation)	Not in source	Submitted	[11]
Programme Outage	Not in source	Not in source	Eskom (Generation)	Not in source	Submitted	[11]
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Senior Supervisory Technical	Not in source	Not in source	Eskom	Not in source	Submitted	[11]
Snr Advisor Application	Not in source	Not in source	Eskom	Not in source	Submitted	[11]
Prof Engineering Quality Supply	Not in source	Not in source	Eskom (National)	Not in source	Submitted	[11]
Secretary	Not in source	Not in source	Eskom	Not in source	Submitted	[11]
Graduate Commercial	Not in source	Not in source	Eskom (Generation)	Not in source	Submitted	[11]
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Technician in Training	Not in source	Not in source	Eskom	Not in source	Submitted	[11]
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Based on 50 sources

Learner Name	Qualification Title	SAQA ID	NQF Level	Status/Outcome	Institution	Date	Subject/Module	Source
Tshingombe Tshitadi	National N Diploma Engineering	90674	Level 6	Submitted / Pending	DHET / St Peace College / 30_39	2024-02-12 / 2023-06-03 / 2023-03-11	Engineering Studies N4–N6; Electrical, Mechanical and related disciplines; Mathematics, Engineering Science, Industrial Electronics, Electro-technics, Digital Electronics, Power Machines, Supervisory Management,	[1-5]

							Control Systems, Installation Rules, Specialised Electric Codes, Engineering Drawing, Plant Operationel, Electrotechnology	
Tshingombe Tshitadi	National N Diploma Engineering	111285	Level 6	Submitted	DHET / QCTO	2024-02-12	Engineering Studies N4–N6	[1, 6]
Tshingombe Tshitadi	Doctoral Degree in Electrical Engineering	Not in source	Level 10 (Inferred)	Awarded	St Peace College	2000-12-01	Electrical Engineering	[3]
Tshingombe Tshitadi	National Diploma in Electrical Engineering (NQF 6)	111285	Level 6	In Progress	St Peace College	2024-07-15	Industrial Electronics N1, Engineering Drawing N1, Electrical Trade Theory N1, Mathematics N1	[4, 7]
Tshingombe Tshitadi	National Diploma in Policing	Not in source	Level 6	Awarded	Not in source	Not in source	Policing and Security	[6]
Tshingombe Tshitadi	National Diploma in Engineering Technology (Scholarship Application)	Not in source	Level 6	Designated Authority Submission Review	South African Qualifications Authority (SAQA)	2025-07-21	SARAO Bachelor in Engineering Technology	[3]
Tshingombe Tshitadi	National N Diploma: Art and Design	66994	Level 6	Not in source	Not in source	Not in source	Drawing, Graphic Design, Painting, Three-Dimensional Studies, Ceramics, Textile Design/Fibre Art,	[3]

							Photography, Jewellery Design and Manufacturing	
Tshingombe Tshitadi	Advanced Certificate in Advanced Phase Teaching	67q0	Level 6	Submitted	DHET / 30_39	2023-05-11	Advanced Phase Teaching; Senior Phase Teaching; Continuous professional development, ICT competence, inclusive education	[1-5]
Tshingombe Tshitadi	Assessor / Moderator Engineering Electrical	Not in source	Level 5	Competent	Schneider Electric / SASSETA	2024-04-04	Engineering Electrical	[2]
Tshingombe Tshitadi	Artisan Electronics	Not in source	Level 4	Awarded	SAQA	2023-06-20	Electronics	[8, 9]
Tshingombe Tshitadi	National Certificate (Trade Test)	Not in source	Level 4	Awarded	St Peace College	2024-06-21	Engineering Electrical	[2]
Tshingombe Tshitadi	National Certificate N1	63375	Level 2	Pass	St Peace College / DHET	2024-02-12 / 2021	Electrical Trade Theory, Mathematics, Engineering Drawing, Industrial Electronics	[1, 3]
Tshingombe Tshitadi	N1 Certificate: Engineering Studies	63375	Level 1 (Inferred)	Pending / Prerequisite	St Peace College / 30_39	2023-01-16	Electrical Trade Theory N1; Foundational entry point for engineering studies	[2, 4, 5]
Tshingombe Tshitadi	Banknote Technician Assistant	Not in source	Level 1	Pass	SP Peace College	2022-06-20	Banknote Machine Artisan	[10, 11]
Tshingo	National 4 Skills	Not	SCQF	Pass	Scottish	Not	Mechanical,	[12]

mbe Tshitadi	for Work Engineering Skills	in source	Level 4		Qualifications Authority (SQA)	in source	Electrical/Electronic, Fabrication, Manufacture & Assembly	
Tshingombe Tshitadi	Diploma in Applied Psychology - Consumer Behavior	Not in source	Not in source	Pass / Completed	Alison	2025-06-25 / 2025-11-25	Consumer Behavior; Consumer psychology and decision-making; Marketing applications	[1-5]
Tshingombe Tshitadi	Diploma in Outcome-based Education and Academic Quality Assurance	Not in source	Not in source	Pass / Completed	Alison	2025-06-24 / 2025-11-25	Academic Quality Assurance; Outcome-based Education; Curriculum design	[1-5]
Tshingombe Tshitadi	Advanced Diploma in High School Chemistry	Not in source	Not in source	Pass / Completed	Alison	2025-06-01 / 2025-11-25	High School Chemistry; STEM education	[1-3, 5]
Tshingombe Tshitadi	Psychometric Assessment for Caregivers and Counsellors	Not in source	Not in source	83% (In Progress)	Not in source	2025-11-17	Psychometric Assessment; Caregiving and Counselling	[1, 2, 5]
Tshingombe Tshitadi	Build custom agents for Microsoft Teams	Not in source	Not in source	Completed	Microsoft	2024-11-16	Microsoft Teams, AI Agents	[3]
Tshingombe Tshitadi	AI Fluency	Not in source	Not in source	Completed	Microsoft	2025-08-28	AI foundational concepts, AI for philanthropy	[3]
Tshingombe Tshitadi	APL-2007: Accelerate app development by using GitHub Copilot	Not in source	Not in source	Completed	Microsoft	2025-10-04	GitHub Copilot, GitHub Copilot Chat, Visual Studio Code	[3]
Tshingombe	Quick Start: Lightning Web	Not in	Not in source	66%	Trailhead / Salesforce	2025-11-	Lightning Web Components	[1, 5]

Tshitadi	Components	source				17		
Tshingombe Tshitadi	Trailmix #BuiltWithAgentforce Quest	Not in source	Not in source	86%	Trailhead	2025-11-17	Agentforce AI automation	[5]
Tshingombe Tshitadi	DHET-SAQA Discovery Award Prize for Career Novation	Not in source	Not in source	Awarded	DHET and SAQA	Not in source	Career development innovation	[5]

[1] career 29 education materiaux didactic report award certificate prize archfile assessent.docx
[2] career 30 education materiaux didactic report award certificate prize archfile assessent.docx 2.xlsx.docx
[3] CAREER 26 education whole saler trade 29advanced engineering ,, educ didact deliver , mark , braill , certificate.docx
[4] CAREER 26 education whole saler trade 29advanced engineering ,, educ didact deliver , mark , braill , certificate.docx
[5] careee 30 tshingombe.pdf2.pdf
[6] CAREER 26 education whole saler trade 28 advanced engineering ,, educ didact deliver , mark , braill , award financial FREELANCE EDUCATION MONTESORY.docx2.pdf.docx
[7] CAREER 26 education whole saler trade 27 advanced engineering FREELANCE EDUCATION MONTESORY.docx2.pdf.docx
[8] Copilot_20251201_112428.png
[9] Copilot_20251201_112449.png
[10] Copilot_20251201_112406.png
[11] Copilot_20251201_112420.png
[12] CAREER 26 education whole saler trade 28 advanced engineering ,, educ didact deliver , mark , braill , award

Tshingombe Integrated Business Portfolio

FY2023 Strategic Performance & Capabiity Review

Engineering & Manufacturing	Education & Training Systems	Legal Compliance & Security	Digital Fintech Solutions

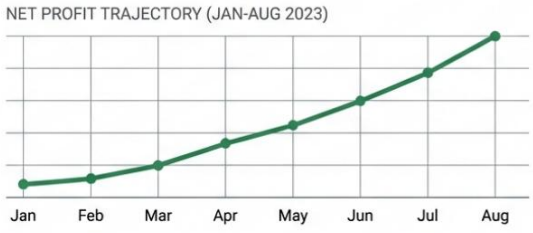
Strictly Confidential | Financial Analysis Period: Jan 2023 – Aug 2023

NotebookLM

Executive Performance Dashboard

NET PROFIT MARGIN	TOTAL ASSET VALUATION	NET PROFIT (YTD)	VAT ACCOUNT BALANCE
598%	ZAR 9.1 Billion	ZAR 7.6 Billion	ZAR 1.14 Billion

Tshingombe has achieved hyper-efficiency in FY2023, converting diverse revenue streams—from high-voltage engineering to digital asset management—into a substantial equity position of R7.6 Billion.



NotebookLM

The Central Operating System:
Documents Wallet Portfolio

Project Management
- Appointment project file
- Order sale company
- Engineering project order

Data Archives
- Database employment
- Bibliotheca
- Arch file office document

DOCUMENTS WALLET

Financial Control
- Bank wallet
- Salary printed code
- Fiscal fraud detection

Compliance
- Safety wallet
- Court order data
- Risk assessment book

> A comprehensive information handling manual system designed for engineering creation, labour adjudication, and financial instrumentation. The Wallet serves as the evidence repository for the 'Office Engineering project order management'.'

NotebookLM

Engineering & Manufacturing Capabilities

Service Offerings

Electrical Infrastructure
- Engineering elect, electrotech, load EIC
- Manufacture AC/DC machine motor, alternator
- Substation construction

Civil & Mining
- Construction civil, mechanic
- Mining maintenance, repair
- Geotechnical & Metallurgy

Advanced Logic
- Control logic engineering fund
- Electromagnetic static load

ZAR 3.45 Billion
Revenue: Manufacture Control Logic

ZAR 6.0 Billion
Gross Revenue: Engineering Construct Elect

NotebookLM

Education Ecosystem: From Montessori to Polytechnic

Certification & Training Portfolio

- **Early Childhood**: Montessori education (Atlantic International University).
- **Technical Training**: Instruct commission electrotech, Biotech skill dev, Engineering physics.
- **Digital Skills**: Google Play Academy certifications (Store Optimization).

CERTIFICATE

OF PARTICIPATION

Tshingombe Tshitadi

For participating in the Class.

Montessori Beyond the Materials

NotebookLM

Methodology:

Comprehensive 'Trainer curriculum' and 'Exercise book' approach with integrated 'Instruction book' systems.

Legal Compliance, Security & Labor Relations

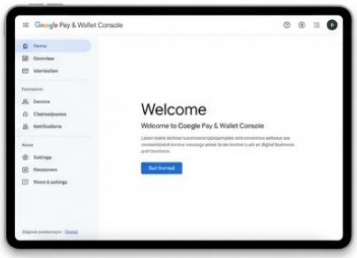
Core Services

- Court order award ruling & Labour notice motion
- Rescission ruling & Arbitration
- Risk assessment book & Policy safety database
- Guard protection services

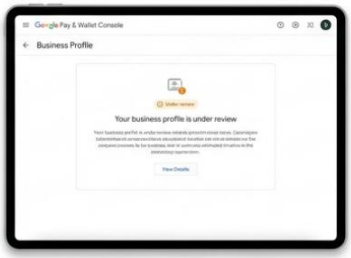
NotebookLM

Digital Transformation: The Google Wallet Integration

Visuals



Google Pay & Wallet Console: Welcome



Business Profile: Status Screen

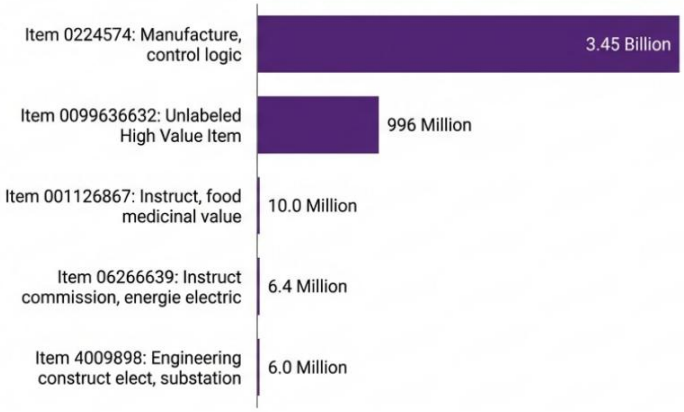
Project Data

- **Platform:** Google Wallet API & Google Pay Console
- **Current Phase:** Demo Mode (Creating and testing classes/passes)
- **Objective:** Request publishing access for digital business identity
- **Issuer ID:** 3388000000022260070
- **Integration:** REST API access via Service Account

NotebookLM

Revenue Analysis: High-Value Inventory & Services

Top 5 Revenue Generators (ZAR)



Total Sales Summary

- Gross Sales by Item: ZAR 5.8 Billion
- Net Sales (after credits): ZAR 1.7 Billion

NotebookLM

Financial Position: Balance Sheet Overview

As at 13 August 2023

Helvetica Now Display Bold	Total Liabilities
Total Assets	**Total Liabilities**
ZAR 9,095,690,296	**ZAR 1,494,094,341**
Primary Driver: Accounts Receivable (~R7.1B)	Includes VAT Owing (~R889M)
	Total Equity
	ZAR 7,601,595,955

Strong equity position driven by high-value accounts receivable portfolio.

NotebookLM

Accounts Receivable & Strategic Client Portfolio

ZAR 9.1 Billion

Total Invoices Owed to Company

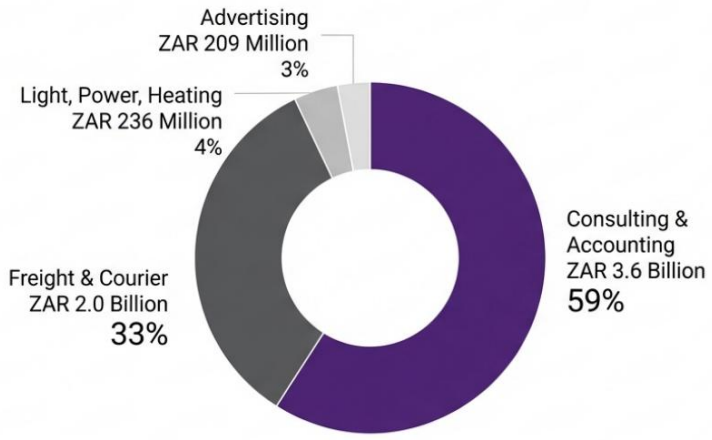
Client Concentration Analysis

Primary Client: mmsale@shoprite.co.za
Concentration: 81.55% of Total AR
Value: ZAR 7.4 Billion
Scope: Electrical engineering sub contractor rate, Manufacture control logic, Construct elect traction.

Receivables Aging Profile

NotebookLM

Operational Expenditure Analysis



Key Insight

Roboto Regular: High investment in professional services (Consulting/Accounting) reflects the complex regulatory framework of the 'Documents Wallet' portfolio management.

NotebookLM

Diverse Asset & Inventory Portfolio

Tangible Industrial Assets

- Cable port USB, fibre optic
- AC/DC machine motor
- Drilling, turning, foundry equipment
- Substation construction materials

Intangible & Intellectual Property

- Fiscal fraud detection tools
- Database intelligence robot
- Biotech genie software
- Copyrights: Engineering chemistry & physics

NotebookLM

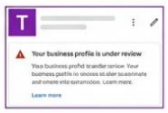
Technology Stack & Digital Certifications

Partnerships & Tools

- Google Wallet API / Play Academy
- Xero Financial Management
- Webassessor Exam Delivery

Credential Status

- Google Play Store Optimization Exam: Passed
- REST API Access: Registered
- Business Profile Status: Under Review



NotebookLM

Corporate Identity & Contact in Helvetia

Business Profile Card

Name: Tshingombe Tshitadi

Category: Miscellaneous Apparel and Accessory Shops (MCC 5699) / Engineering

Location: Johannesburg, South Africa

Website: https://wwwtshingombe.com

Contact: +27 72 529 8946 | tshingombekb@gmail.com

Current Status: Business Profile under review for publishing access.

NotebookLM

Strategic Outlook: Beyond the Documents Wallet
FY2024 Roadmap
PUBLISH
Transition Google Wallet integration from Demo to Live environment.
COLLECT
Realize ZAR 9.1 Billion in outstanding Accounts Receivable (Shoprite).
EXPAND
Scale 'Instruct' and 'Manufacture' verticals globally.
READY FOR PUBLISHING ACCESS.
NotebookLM

Business Financial Snapshot: Tshingombe (August 2023)

August 2023 Sales Performance

R1.7 Billion in Total Sales

Total sales generated during the month of August 2023 after credits.

Top-Grossing Sales Items

- Manufacture, control logic, engineering fund, syst — R3,450,008,767.00
- Item: 0099635632 - 0099636633 — R996,636,996.00
- Engineering, Else, electromoguelte, AC, RC load — R836,399,512.00

The highest-value sales were primarily in engineering, manufacturing, and instruction services.

Overall Financial Health

R7.6 Billion Profit (Year-to-Date)

Profit generated from January 1 to August 13, 2023.

R9.1 Billion in Unpaid Invoices

Total value of invoices awaiting payment from customers as of August 2023.

R799,816 in Bills to Pay

Total value of bills awaiting payment to suppliers.

NotebookLM

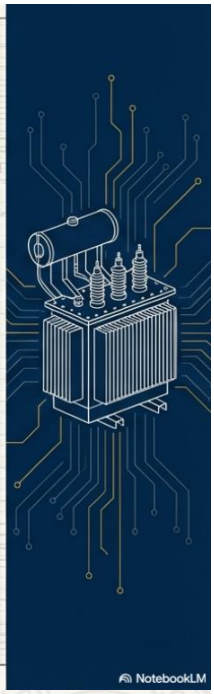
Synthesis of Professional Engineering Competence & Curriculum Assessment

COMPREHENSIVE PORTFOLIO OF EVIDENCE

TSHINGOMBE TSHITADI

- **Role:** Engineering Student & Assessment Moderator
- **Institution:** St Peace College / NATED System
- **Focus:** Electrical Engineering (Heavy Current) | Digital Automation | SAQA Compliance

AUDIT READY



Verified Learner Identity & SAQA Identifiers

Profile Snapshot

VERIFIED

Name:
Tshingombe Tshitadi

SAQA Asset ID:
09121

Institutional Code:
30_39

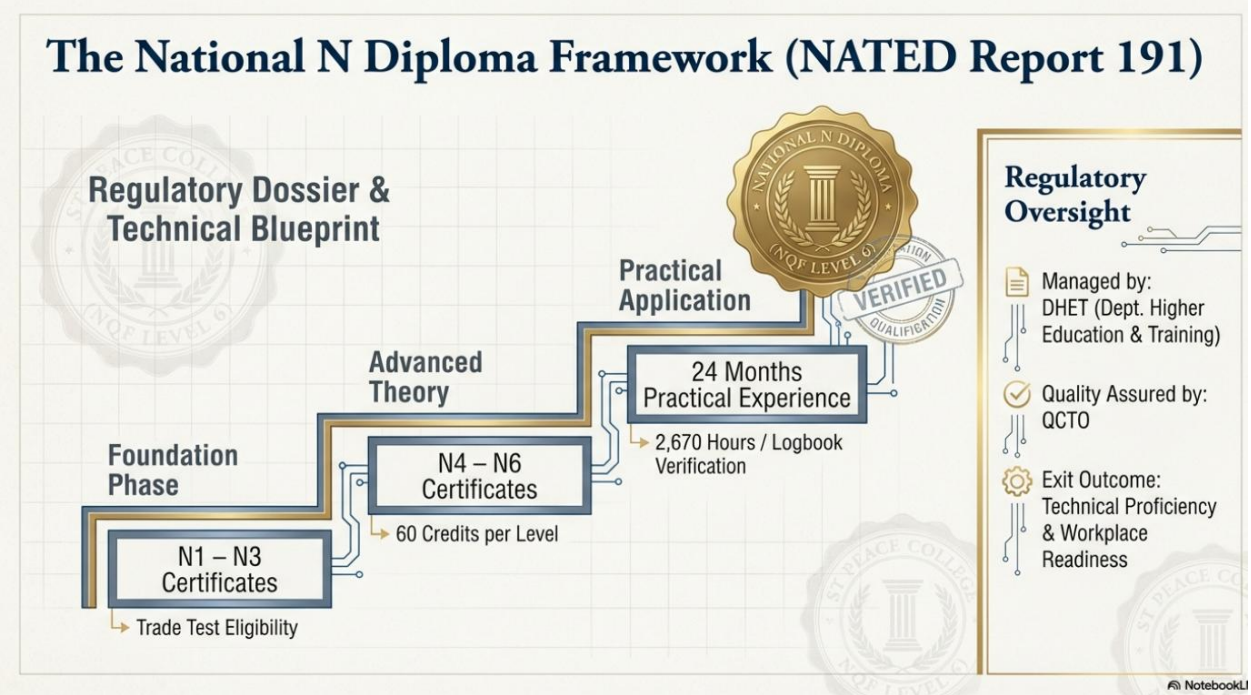
Assessment Policy Ref:
IE099

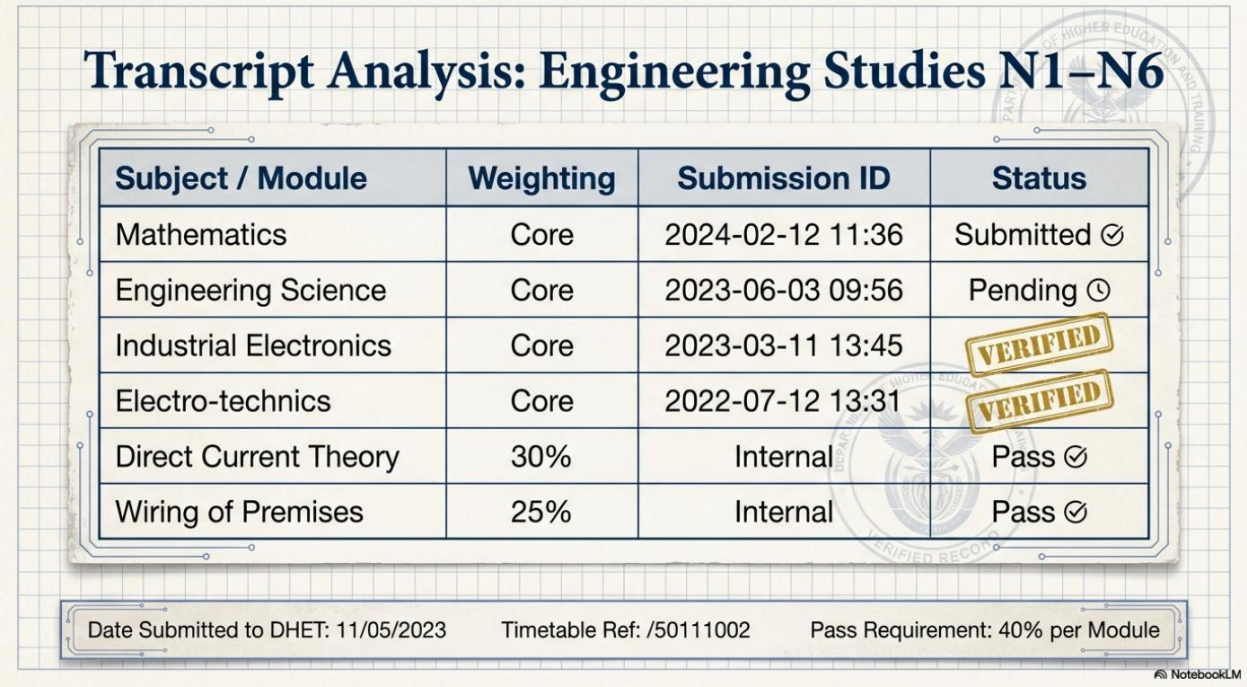
VERIFIED RECORD

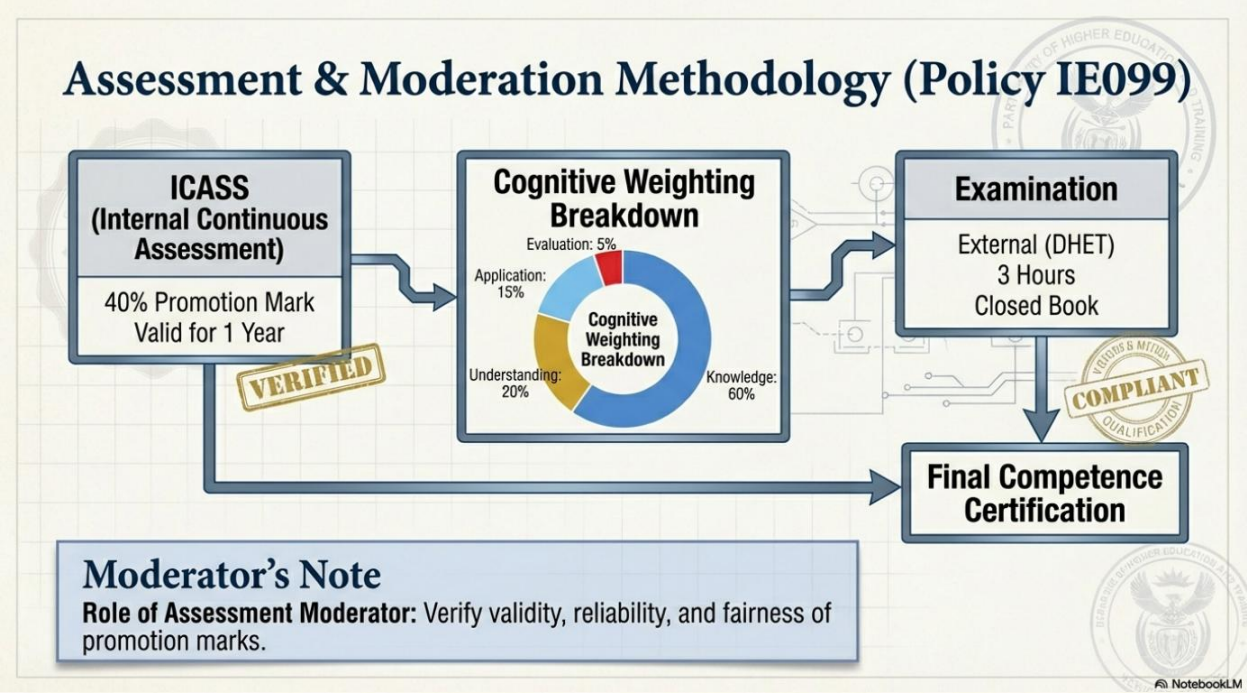
Registered Qualifications

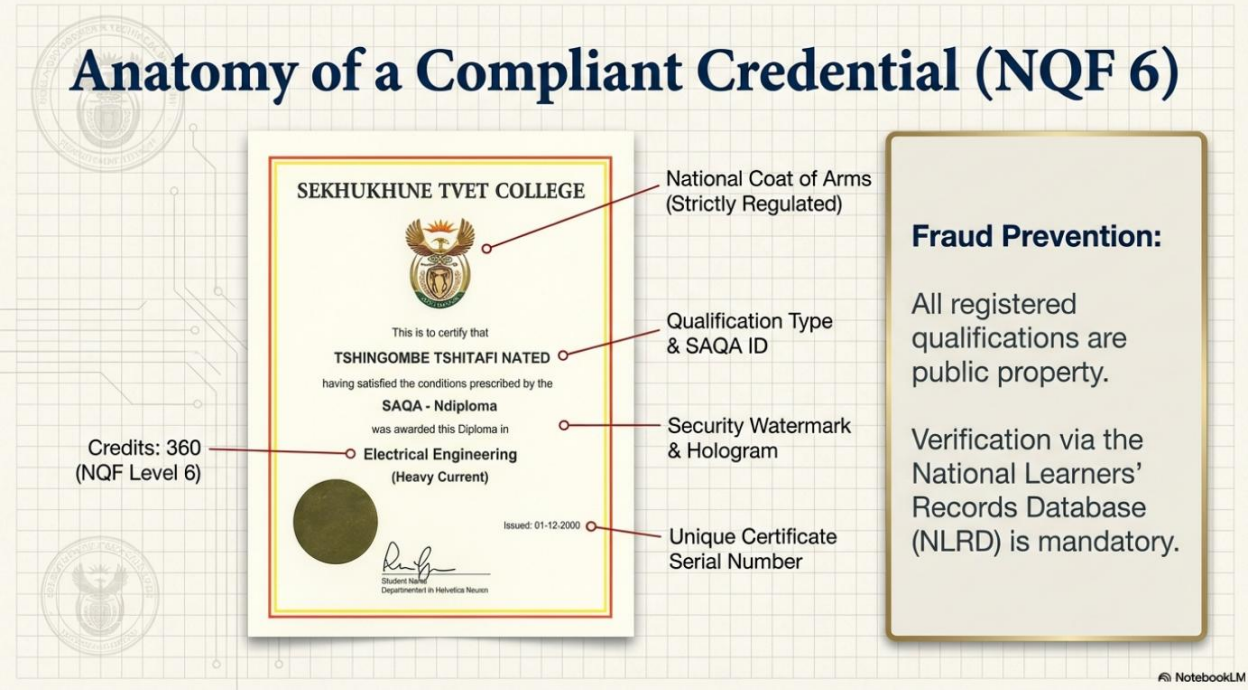
- National N Diploma Engineering (SAQA ID 90674 / NQF Level 6)
- Advanced Certificate in Advanced Phase Teaching (SAQA ID 67q0)
- N1 Certificate Entrance ID: 67491

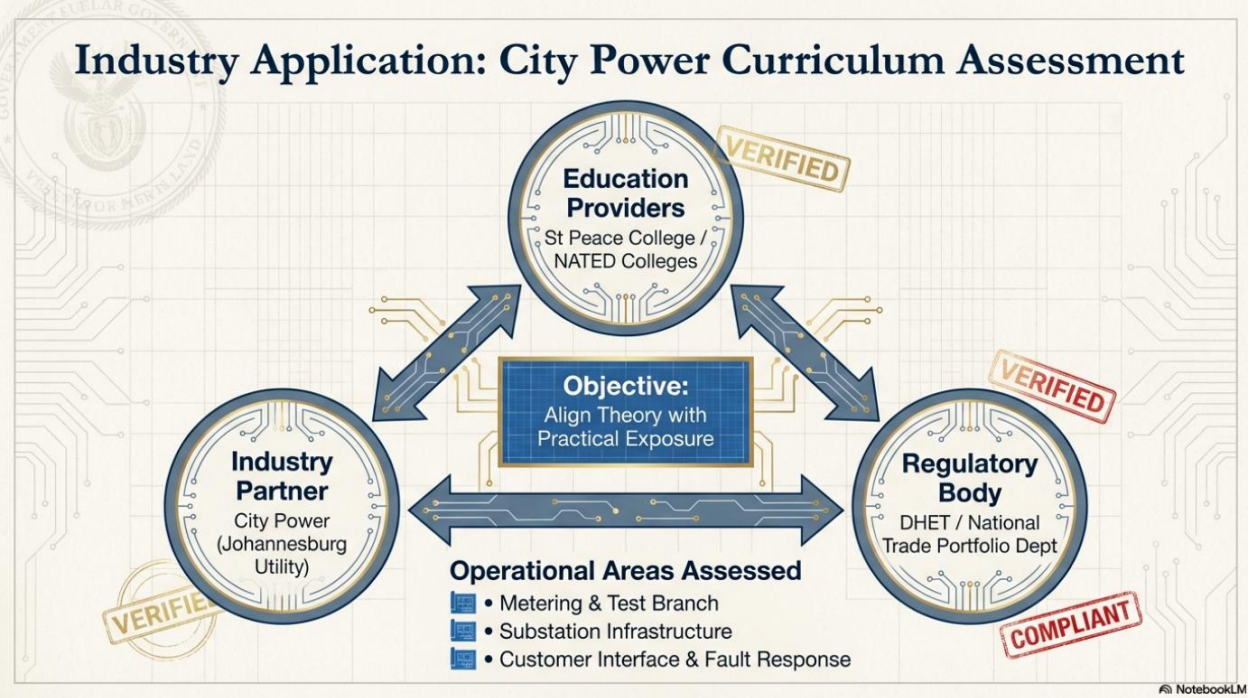
NotebookLM

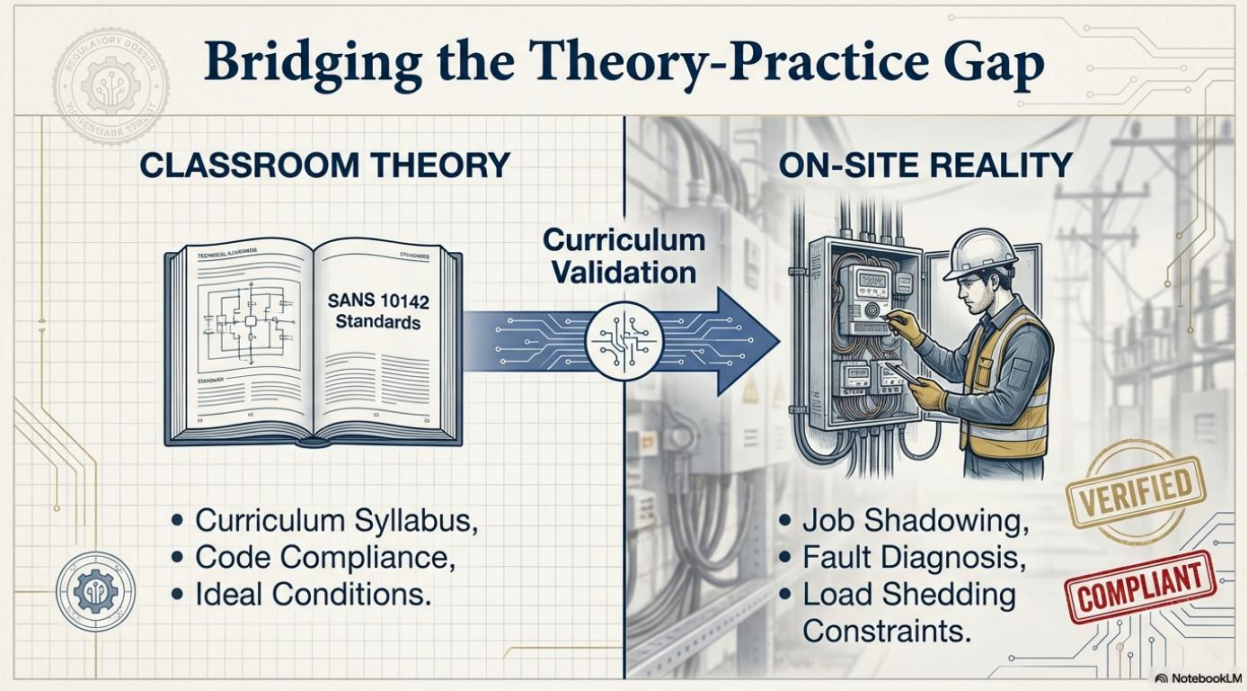

The National N Diploma Framework (NATED Report 191)
Regulatory Dossier & Technical Blueprint
Foundation Phase
N1 – N3 Certificates
Trade Test Eligibility
Advanced Theory
N4 – N6 Certificates
60 Credits per Level
Practical Application
24 Months Practical Experience
2,670 Hours / Logbook Verification
VERIFIED
Regulatory Oversight
Managed by: DHET (Dept. Higher Education & Training)
Quality Assured by: QCTO
Exit Outcome: Technical Proficiency & Workplace Readiness
NotebookLM

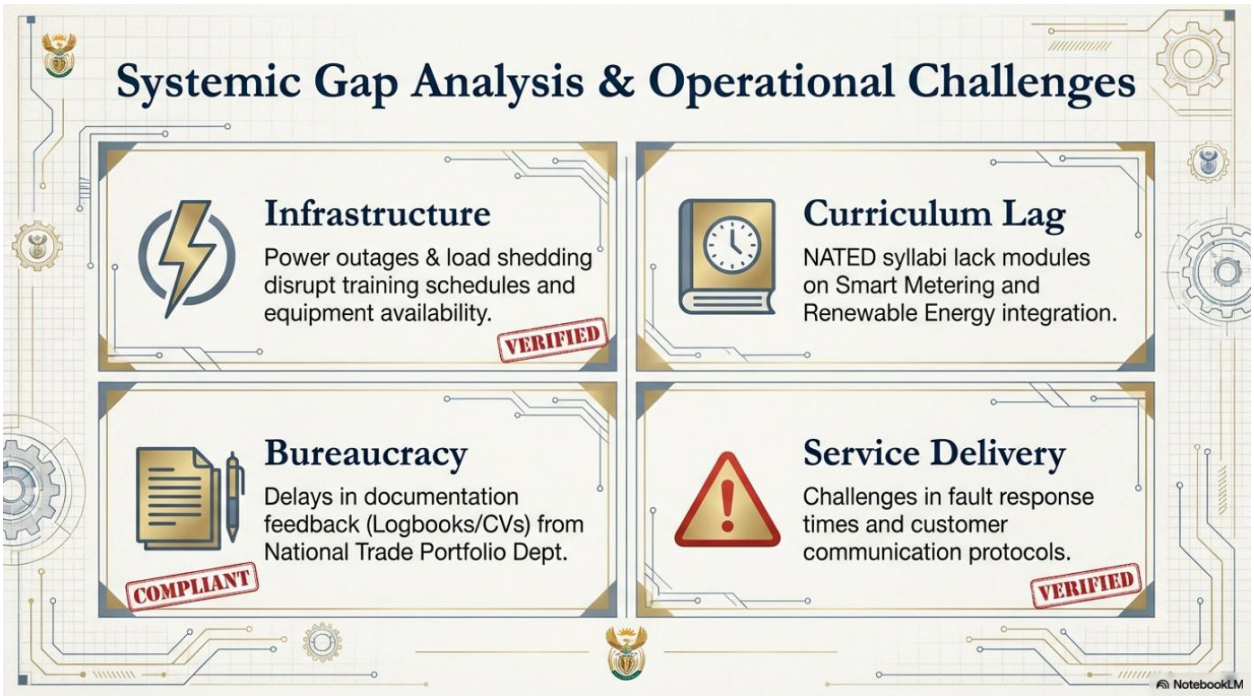

Transcript Analysis: Engineering Studies N1–N6
Subject / Module | Weighting | Submission ID | Status
Mathematics | Core | 2024-02-12 11:36 | Submitted
Engineering Science | Core | 2023-06-03 09:56 | Pending
Industrial Electronics | Core | 2023-03-11 13:45 | VERIFIED
Electro-technics | Core | 2022-07-12 13:31 | VERIFIED
Direct Current Theory | 30% | Internal | Pass
Wiring of Premises | 25% | Internal | Pass
Date Submitted to DHET: 11/05/2023
Timetable Ref: /50111002
Pass Requirement: 40% per Module
NotebookLM

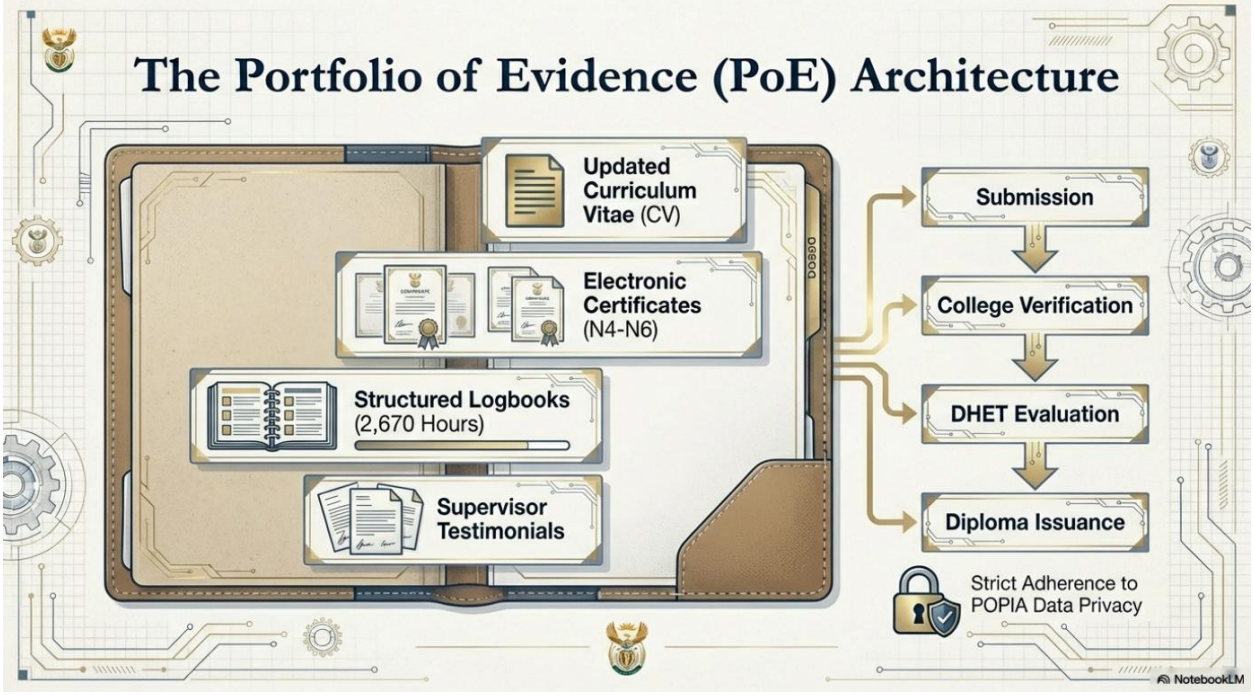

Assessment & Moderation Methodology (Policy IE099)
ICASS
(Internal Continuous Assessment)
40% Promotion Mark
Valid for 1 Year
VERIFIED
Cognitive Weighting Breakdown
Evaluation: 5%
Application: 15%
Understanding: 20%
Knowledge: 60%
Cognitive Weighting Breakdown
Examination
External (DHET)
3 Hours
Closed Book
COMPLIANT
Final Competence Certification
Moderator's Note
Role of Assessment Moderator: Verify validity, reliability, and fairness of promotion marks.
NotebookLM

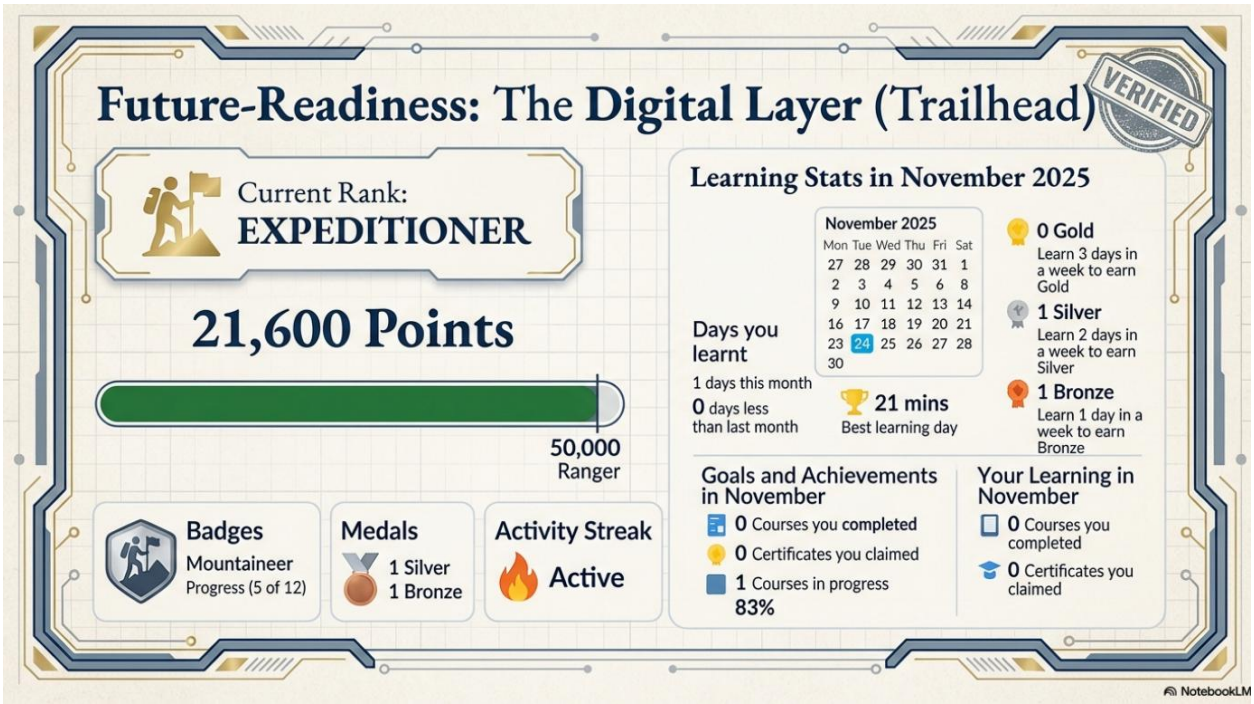

Anatomy of a Compliant Credential (NQF 6)
SEKHUKHUNE TVET COLLEGE
This is to certify that
TSHINGOMBE TSHITAFI NATED
having satisfied the conditions prescribed by the
SAQA - Ndiploma
was awarded this Diploma in
Electrical Engineering
(Heavy Current)
Issued: 01-12-2000
National Coat of Arms (Strictly Regulated)
Qualification Type & SAQA ID
Security Watermark & Hologram
Unique Certificate Serial Number
Credits: 360 (NQF Level 6)
Fraud Prevention:
All registered qualifications are public property.
Verification via the National Learners' Records Database (NLRD) is mandatory.
NotebookLM

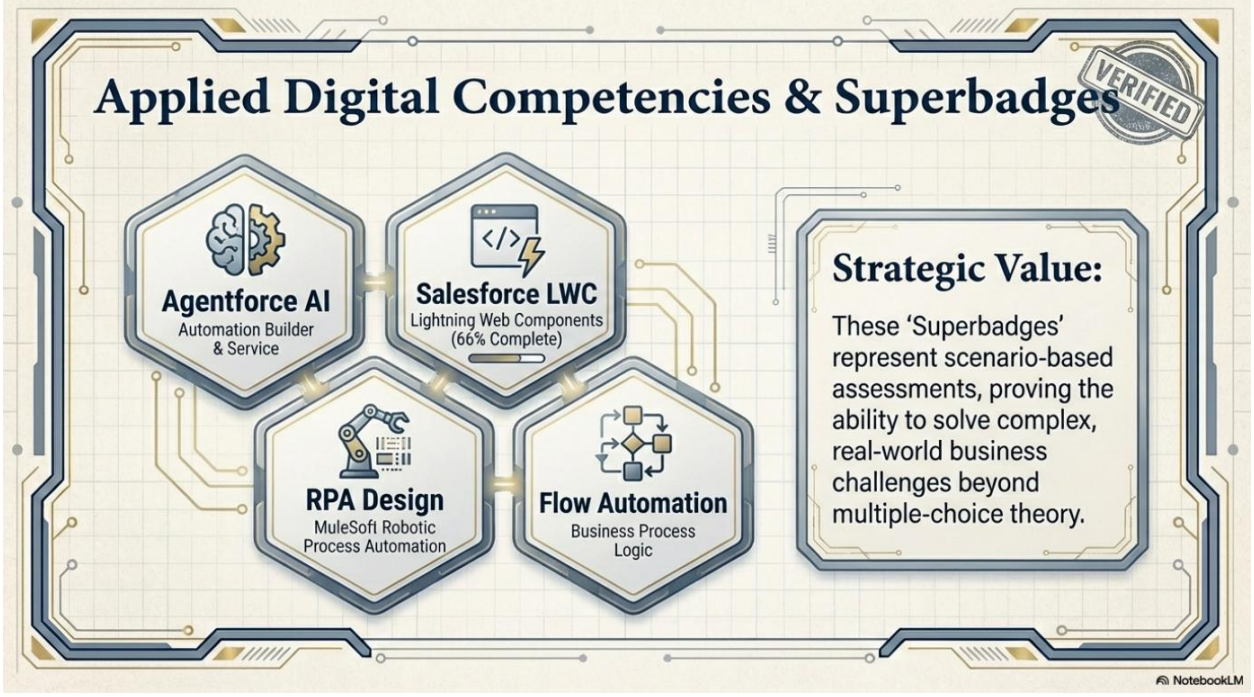

Industry Application: City Power Curriculum Assessment
Education Providers
St Peace College / NATED Colleges
VERIFIED
Objective:
Align Theory with Practical Exposure
Industry Partner
City Power (Johannesburg Utility)
VERIFIED
Regulatory Body
DHET / National Trade Portfolio Dept
VERIFIED
COMPLIANT
Operational Areas Assessed
• Metering & Test Branch
• Substation Infrastructure
• Customer Interface & Fault Response
NotebookLM


Bridging the Theory-Practice Gap
CLASSROOM THEORY
ON-SITE REALITY
Curriculum Validation
SANS 10142 Standards
• Curriculum Syllabus,
• Code Compliance,
• Ideal Conditions.
• Job Shadowing,
• Fault Diagnosis,
• Load Shedding Constraints.
VERIFIED
COMPLIANT
NotebookLM

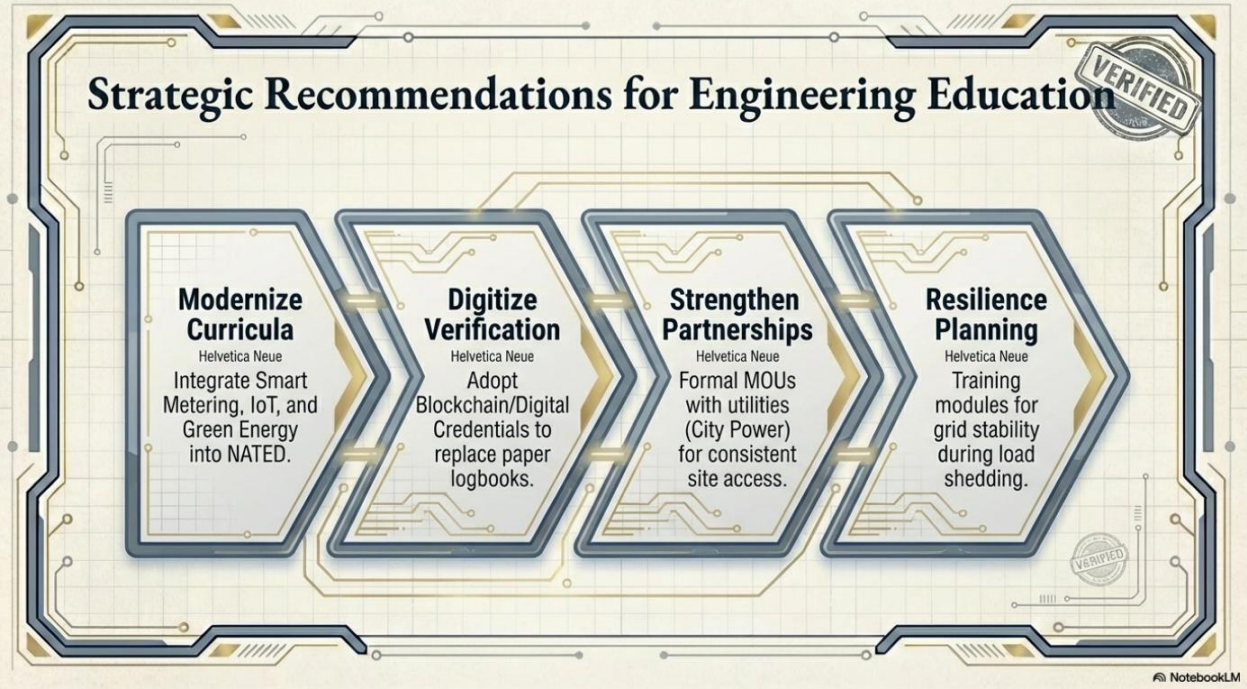

Systemic Gap Analysis & Operational Challenges
Infrastructure
Power outages & load shedding disrupt training schedules and equipment availability.
VERIFIED
Curriculum Lag
NATED syllabi lack modules on Smart Metering and Renewable Energy integration.
Bureaucracy
Delays in documentation feedback (Logbooks/CVs) from National Trade Portfolio Dept.
COMPLIANT
Service Delivery
Challenges in fault response times and customer communication protocols.
VERIFIED
NotebookLM

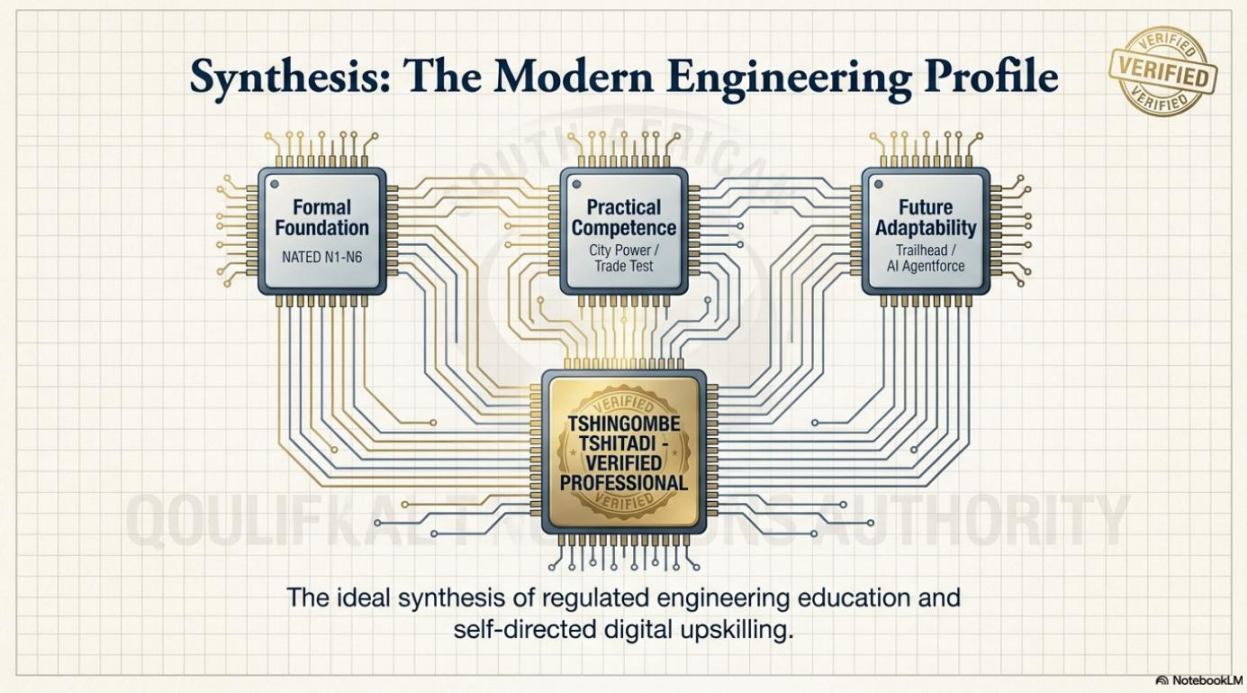

The Portfolio of Evidence (PoE) Architecture
Updated Curriculum Vitae (CV)
Electronic Certificates (N4-N6)
Structured Logbooks (2,670 Hours)
Supervisor Testimonials
Submission
College Verification
DHET Evaluation
Diploma Issuance
Strict Adherence to POPIA Data Privacy
NotebookLM

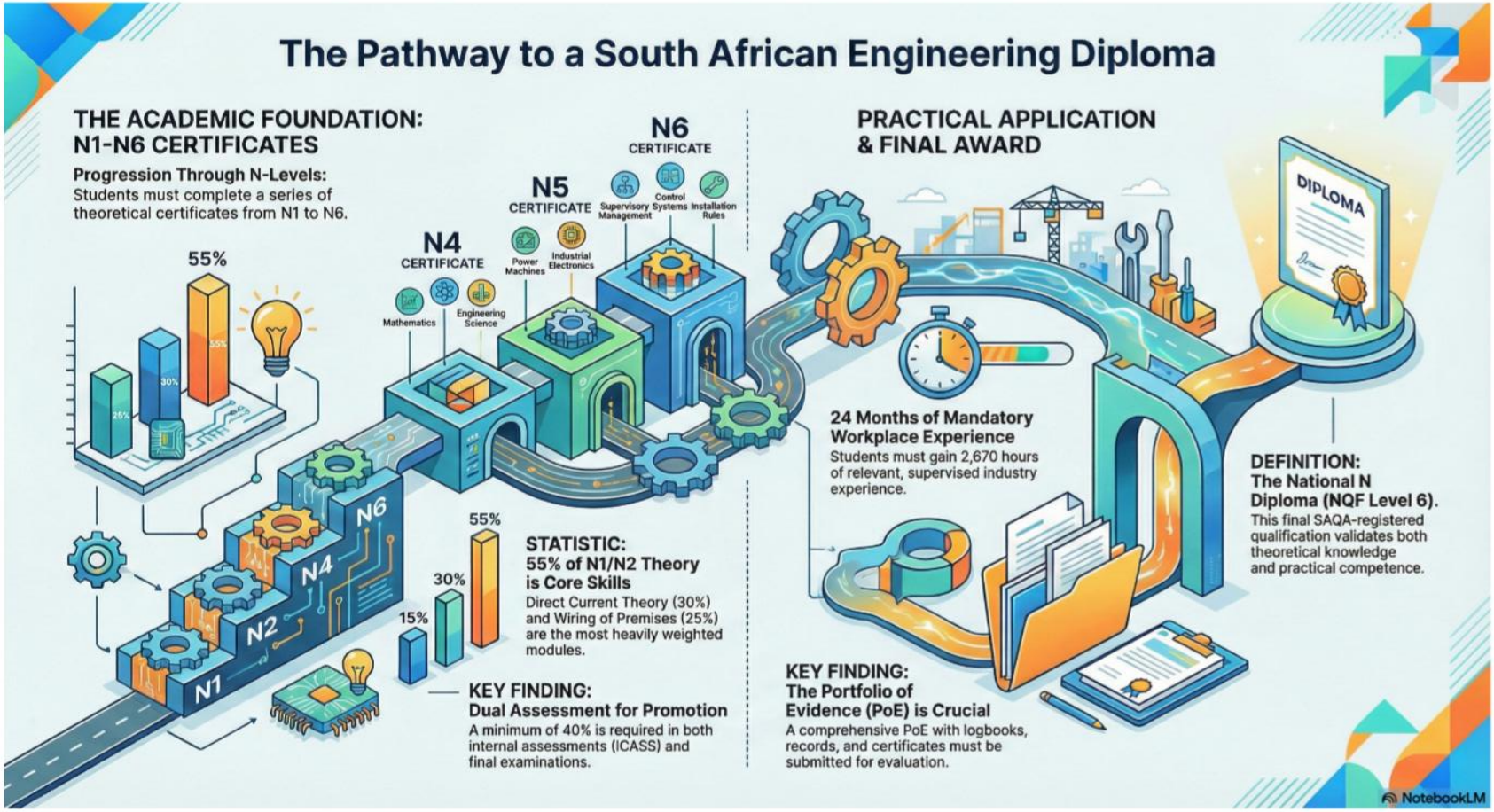

Future-Readiness: The Digital Layer (Trailhead)
VERIFIED
Current Rank:
EXPEDITIONER
21,600 Points
50,000
Ranger
Badges
Mountaineer
Progress (5 of 12)
Medals
1 Silver
1 Bronze
Activity Streak
Active
Learning Stats in November 2025
November 2025
Mon Tue Wed Thu Fri Sat
27 28 29 30 31 1
2 3 4 5 6 8
9 10 11 12 13 14
16 17 18 19 20 21
23 24 25 26 27 28
30
Days you learnt
1 days this month
0 days less than last month
21 mins
Best learning day
0 Gold
Learn 3 days in a week to earn Gold
1 Silver
Learn 2 days in a week to earn Silver
1 Bronze
Learn 1 day in a week to earn Bronze
Goals and Achievements in November
0 Courses you completed
0 Certificates you claimed
1 Courses in progress
83%
Your Learning in November
0 Courses you completed
0 Certificates you claimed
NotebookLM


Applied Digital Competencies & Superbadges
VERIFIED
Agentforce AI
Automation Builder & Service
Salesforce LWC
Lightning Web Components (66% Complete)
RPA Design
MuleSoft Robotic Process Automation
Flow Automation
Business Process Logic
Strategic Value:
These 'Superbadges' represent scenario-based assessments, proving the ability to solve complex, real-world business challenges beyond multiple-choice theory.
NotebookLM

Holistic Development & Community Impact
VERIFIED
Complementary Diplomas (Alison)
Diploma in Applied Psychology (Consumer Behavior)
Diploma in Outcome-Based Education (OBE)
Advanced Diploma in High School Chemistry
Helvetica Neue
Helvetica Neue
Community Contribution (Sci-Bono Discovery Centre)
Developed 'Journer Expert Assessment Library'
Created Digital CV Writing Workshops
STEAM Career Mentorship
NotebookLM

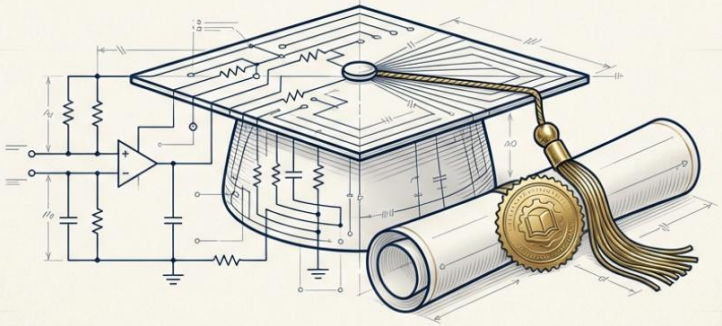

Strategic Recommendations for Engineering Education
VERIFIED
Modernize Curricula
Helvetica Neue
Integrate Smart Metering, IoT, and Green Energy into NATED.
Digitize Verification
Helvetica Neue
Adopt Blockchain/Digital Credentials to replace paper logbooks.
Strengthen Partnerships
Helvetica Neue
Formal MOUs with utilities (City Power) for consistent site access.
Resilience Planning
Helvetica Neue
Training modules for grid stability during load shedding.
NotebookLM


Synthesis: The Modern Engineering Profile
VERIFIED
Formal Foundation
NATED N1-N6
Practical Competence
City Power / Trade Test
Future Adaptability
Trailhead / AI Agentforce
TSHINGOMBE TSHITADI - VERIFIED PROFESSIONAL
The ideal synthesis of regulated engineering education and self-directed digital upskilling.
NotebookLM


The Pathway to a South African Engineering Diploma
THE ACADEMIC FOUNDATION: N1-N6 CERTIFICATES
Progression Through N-Levels:
Students must complete a series of theoretical certificates from N1 to N6.
N6 CERTIFICATE
N5 CERTIFICATE
Supervisory Management
Control Systems
Installation Rules
N4 CERTIFICATE
Power Machines
Industrial Electronics
Mathematics
Engineering Science
55%
30%
25%
N1
N2
N4
N6
55%
30%
15%
STATISTIC:
55% of N1/N2 Theory is Core Skills
Direct Current Theory (30%) and Wiring of Premises (25%) are the most heavily weighted modules.
KEY FINDING:
Dual Assessment for Promotion
A minimum of 40% is required in both internal assessments (ICASS) and final examinations.
PRACTICAL APPLICATION & FINAL AWARD
DIPLOMA
24 Months of Mandatory Workplace Experience
Students must gain 2,670 hours of relevant, supervised industry experience.
DEFINITION:
The National N Diploma (NQF Level 6).
This final SAQA-registered qualification validates both theoretical knowledge and practical competence.
KEY FINDING:
The Portfolio of Evidence (PoE) is Crucial
A comprehensive PoE with logbooks, records, and certificates must be submitted for evaluation.
NotebookLM

Engineering Integrity: From Military Standards to Vocational Mastery

A Strategic Synthesis of MIL-STD-11991B Compliance, NATED Education Pathways, and Audit-Ready Credentialing.



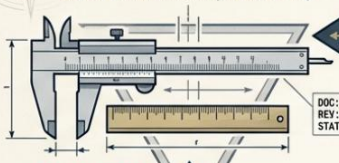
Prepared for Technical Review & Accreditation Boards

NotebookLM

ENGINEERING EXCELLENCE REQUIRES A CLOSED LOOP OF STANDARDS AND VERIFICATION

True engineering competence is a triad of rigorous definition, practical application, and unforgeable proof.

1. THE BENCHMARK (DEFINITION)



DOC: MIL-STD-11991B
REV: B
STATUS: ACTIVE

MIL-STD-11991B.
Managing Parts, Materials, and Processes (PM&P) to ensure reliability and manage obsolescence.

3. THE VERIFICATION (PROOF)

SAQA & DIGITAL PORTFOLIOS.
The regulatory framework that validates competency through audit-ready trails.

REGULATOR: SAQA
VALIDATION: DIGITAL AUDIT TRAIL
ID: E-CERT-1991-SAQA

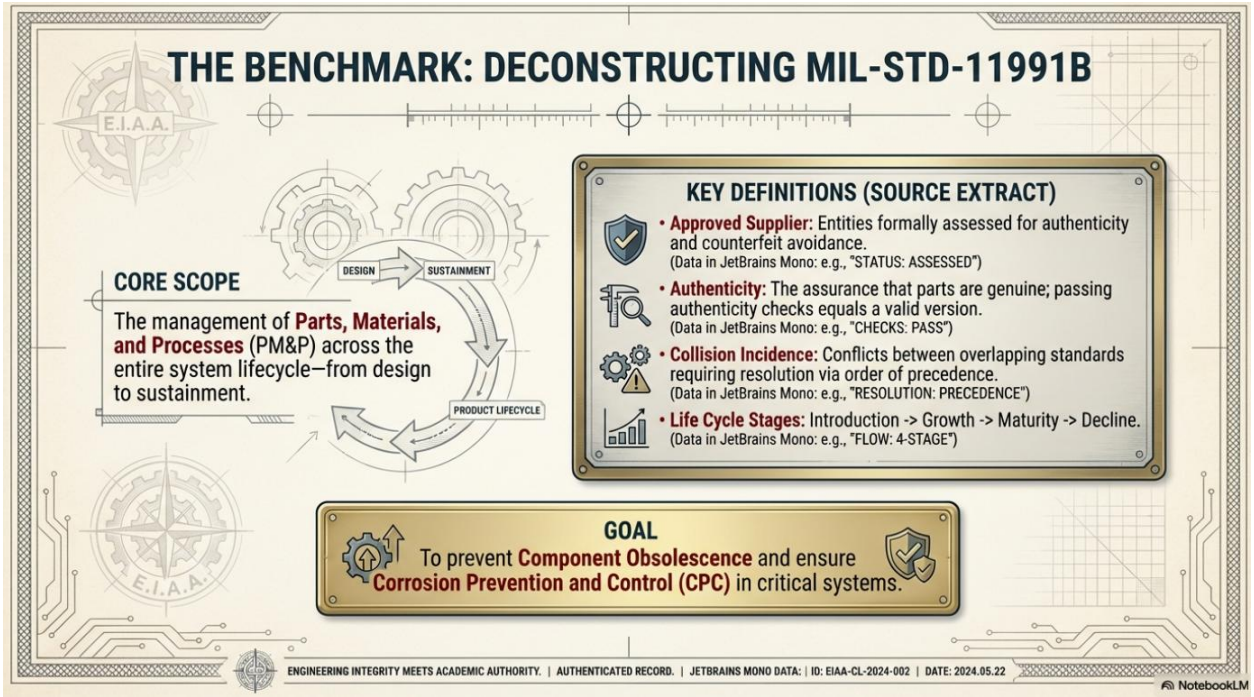
2. THE PATHWAY (EXECUTION)

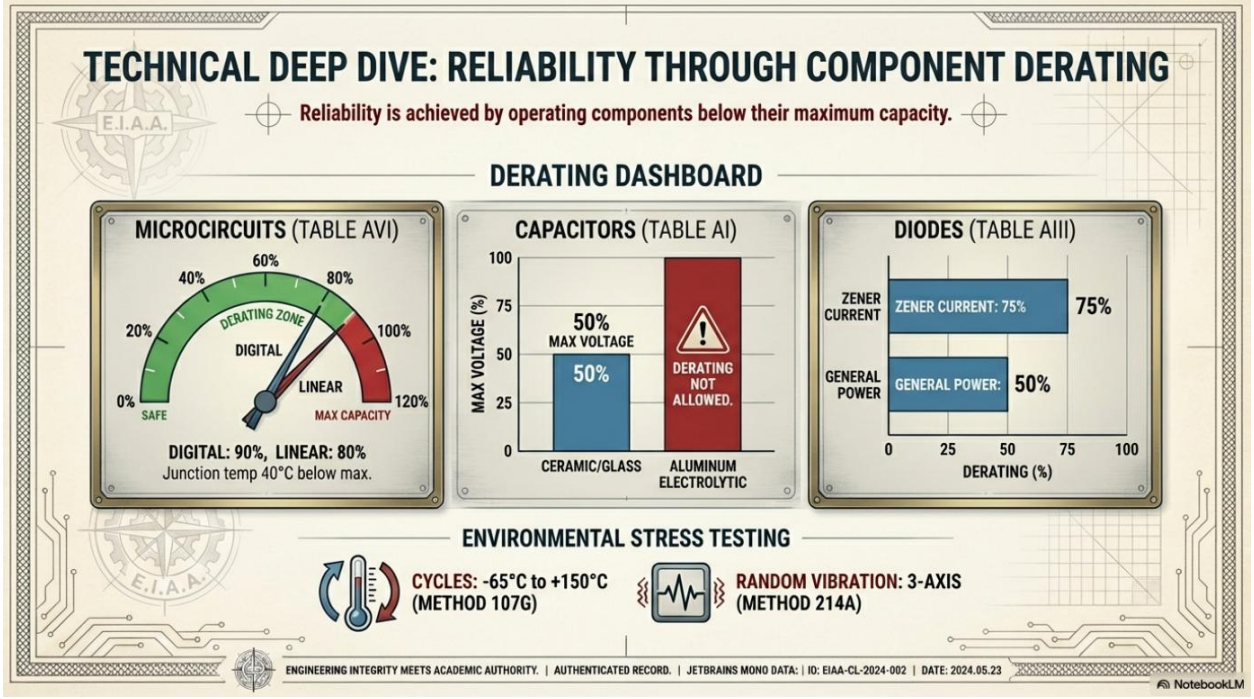
NATED N1-N6 & CITY POWER
The vocational journey from theoretical Heavy Current logic to operational grid realities.

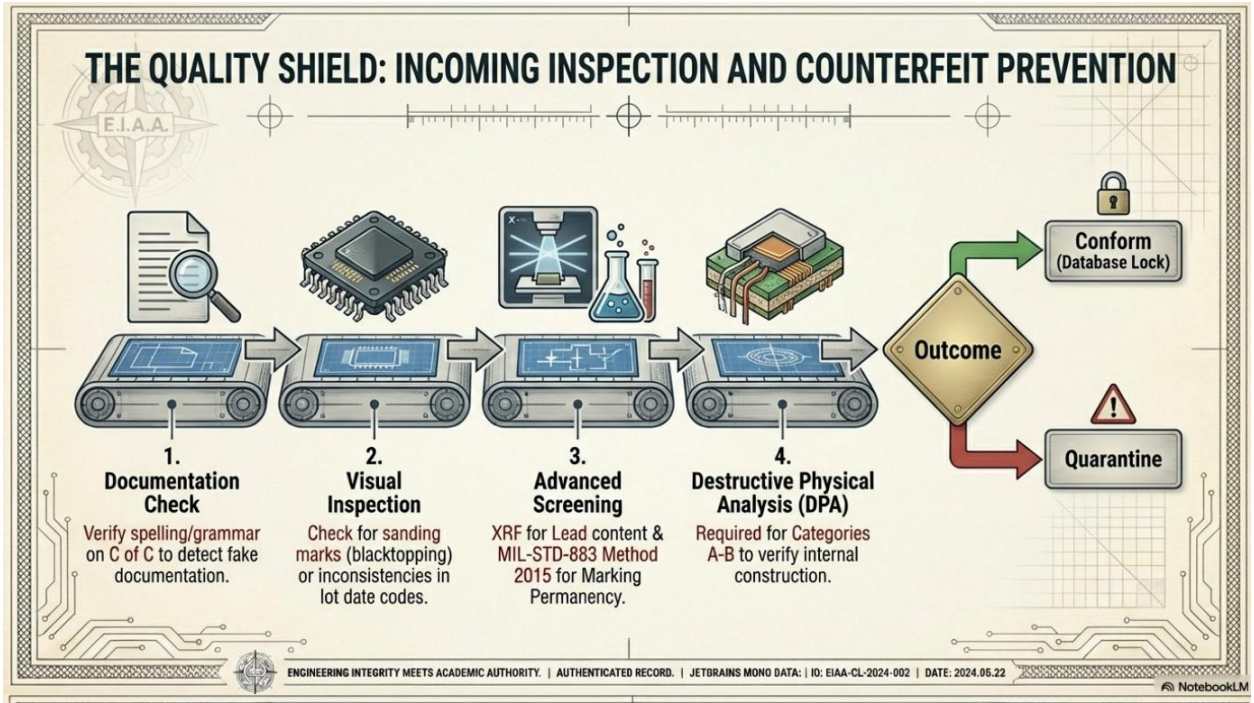
CURRICULUM: NATED N1-N6
FOCUS: HEAVY CURRENT & GRID OPS

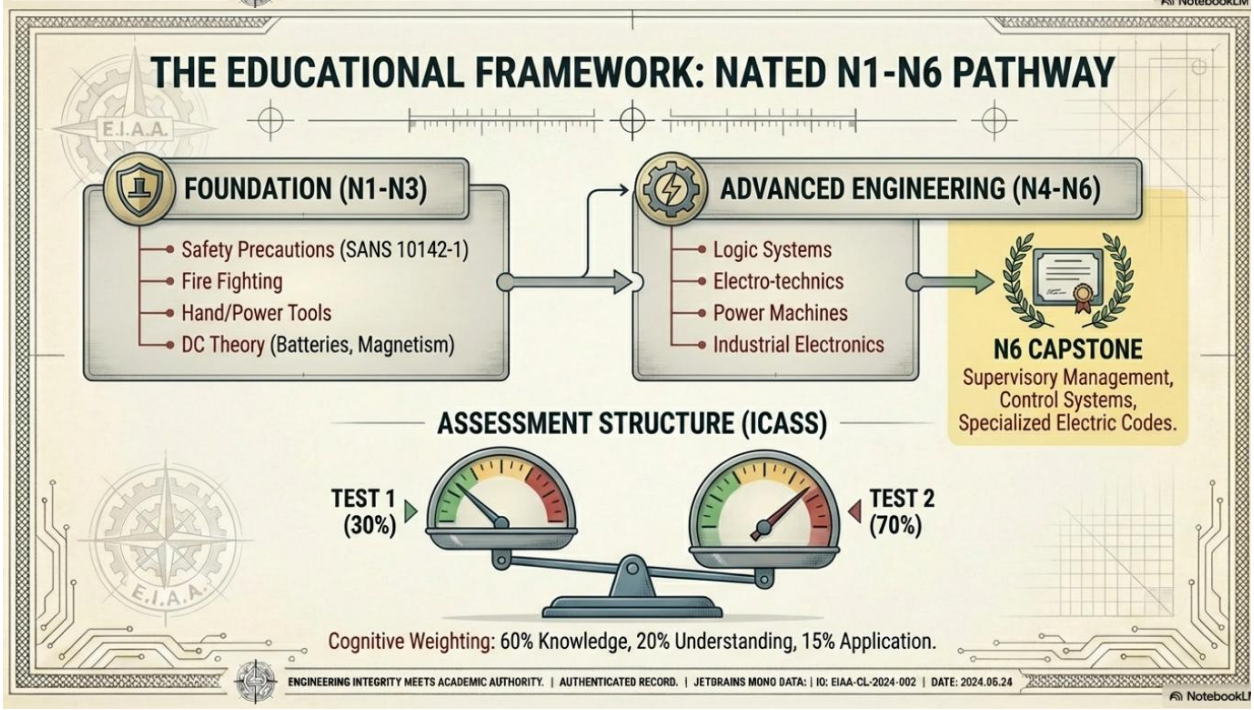
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-001 | DATE: 2024.05.21

NotebookLM


THE BENCHMARK: DECONSTRUCTING MIL-STD-11991B
E.I.A.A.
CORE SCOPE
The management of Parts, Materials, and Processes (PM&P) across the entire system lifecycle—from design to sustainment.
DESIGN
SUSTAINMENT
PRODUCT LIFECYCLE
KEY DEFINITIONS (SOURCE EXTRACT)
• Approved Supplier: Entities formally assessed for authenticity and counterfeit avoidance.
(Data in JetBrains Mono: e.g., "STATUS: ASSESSED")
• Authenticity: The assurance that parts are genuine; passing authenticity checks equals a valid version.
(Data in JetBrains Mono: e.g., "CHECKS: PASS")
• Collision Incidence: Conflicts between overlapping standards requiring resolution via order of precedence.
(Data in JetBrains Mono: e.g., "RESOLUTION: PRECEDENCE")
• Life Cycle Stages: Introduction -> Growth -> Maturity -> Decline.
(Data in JetBrains Mono: e.g., "FLOW: 4-STAGE")
GOAL
To prevent Component Obsolescence and ensure Corrosion Prevention and Control (CPC) in critical systems.
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-002 | DATE: 2024.05.22
NotebookLM


TECHNICAL DEEP DIVE: RELIABILITY THROUGH COMPONENT DERATING
E.I.A.A.
Reliability is achieved by operating components below their maximum capacity.
DERATING DASHBOARD
MICROCIRCUITS (TABLE AVI)
0%
20%
40%
60%
80%
100%
120%
DERATING ZONE
DIGITAL
LINEAR
SAFE
MAX CAPACITY
DIGITAL: 90%, LINEAR: 80%
Junction temp 40°C below max.
CAPACITORS (TABLE AI)
MAX VOLTAGE (%)
100
75
50
25
0
50%
MAX VOLTAGE
50%
DERATING NOT ALLOWED.
CERAMIC/GLASS
ALUMINUM ELECTROLYTIC
DIODES (TABLE AIII)
ZENER CURRENT
ZENER CURRENT: 75%
75%
GENERAL POWER
GENERAL POWER:
50%
0
25
50
75
100
DERATING (%)
ENVIRONMENTAL STRESS TESTING
CYCLES: -65°C to +150°C (METHOD 107G)
RANDOM VIBRATION: 3-AXIS (METHOD 214A)
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-002 | DATE: 2024.05.23
NotebookLM


THE QUALITY SHIELD: INCOMING INSPECTION AND COUNTERFEIT PREVENTION
E.I.A.A.
Outcome
Conform
(Database Lock)
Quarantine
1.
Documentation
Check
Verify spelling/grammar on C of C to detect fake documentation.
2.
Visual
Inspection
Check for sanding marks (blacktopping) or inconsistencies in lot date codes.
3.
Advanced
Screening
XRF for Lead content & MIL-STD-883 Method 2015 for Marking Permanency.
4.
Destructive Physical
Analysis (DPA)
Required for Categories A-B to verify internal construction.
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | IO: EIAA-CL-2024-002 | DATE: 2024.05.22
NotebookLM


THE EDUCATIONAL FRAMEWORK: NATED N1-N6 PATHWAY
E.I.A.A.
FOUNDATION (N1-N3)
Safety Precautions (SANS 10142-1)
Fire Fighting
Hand/Power Tools
DC Theory (Batteries, Magnetism)
ADVANCED ENGINEERING (N4-N6)
Logic Systems
Electro-technics
Power Machines
Industrial Electronics
N6 CAPSTONE
Supervisory Management, Control Systems, Specialized Electric Codes.
ASSESSMENT STRUCTURE (ICASS)
TEST 1
(30%)
TEST 2
(70%)
Cognitive Weighting: 60% Knowledge, 20% Understanding, 15% Application.
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | IO: EIAA-CL-2024-002 | DATE: 2024.05.24
NotebookLM

SPEC SHEET

PROFILE OF COMPETENCE: TSHINGOMBE TSHITADI

IDENTITY: ENGINEERING STUDENT & ASSESSMENT MODERATOR

CREDENTIALS: NATIONAL N DIPLOMA ENGINEERING (NQF LEVEL 6, SAQA ID 90674)

REGISTRATION: PSIRA ASSESSOR/MODERATOR; SACE REGISTERED

INSTITUTIONAL CODE: 30_39 (ST PEACE COLLEGE)

ROLE: EXEMPLAR OF THE SCHOLAR-PRACTITIONER BRIDGING ACADEMIC THEORY AND THE SCI-BONO ASSESSMENT LIBRARY.

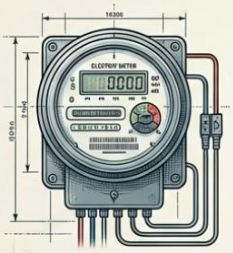
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-002 | DATE: 2024.06.22

NotebookLM

BRIDGING THEORY & PRACTICE: THE CITY POWER VISIT

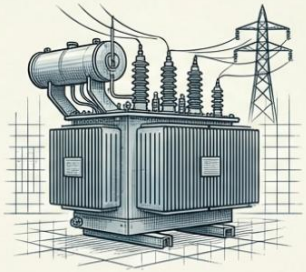
Objective: Aligning NATED electrical theory with the operational realities of a municipal utility.

JOB SHADOWING



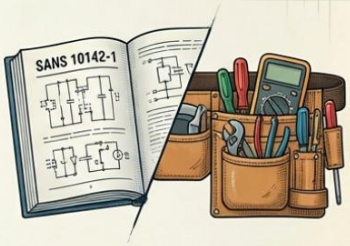
Rotations in Metering (installation/calibration) and Test Branch (fault diagnosis).

SITE INSPECTION



Guided analysis of substations and customer interface centers.

CURRICULUM VALIDATION



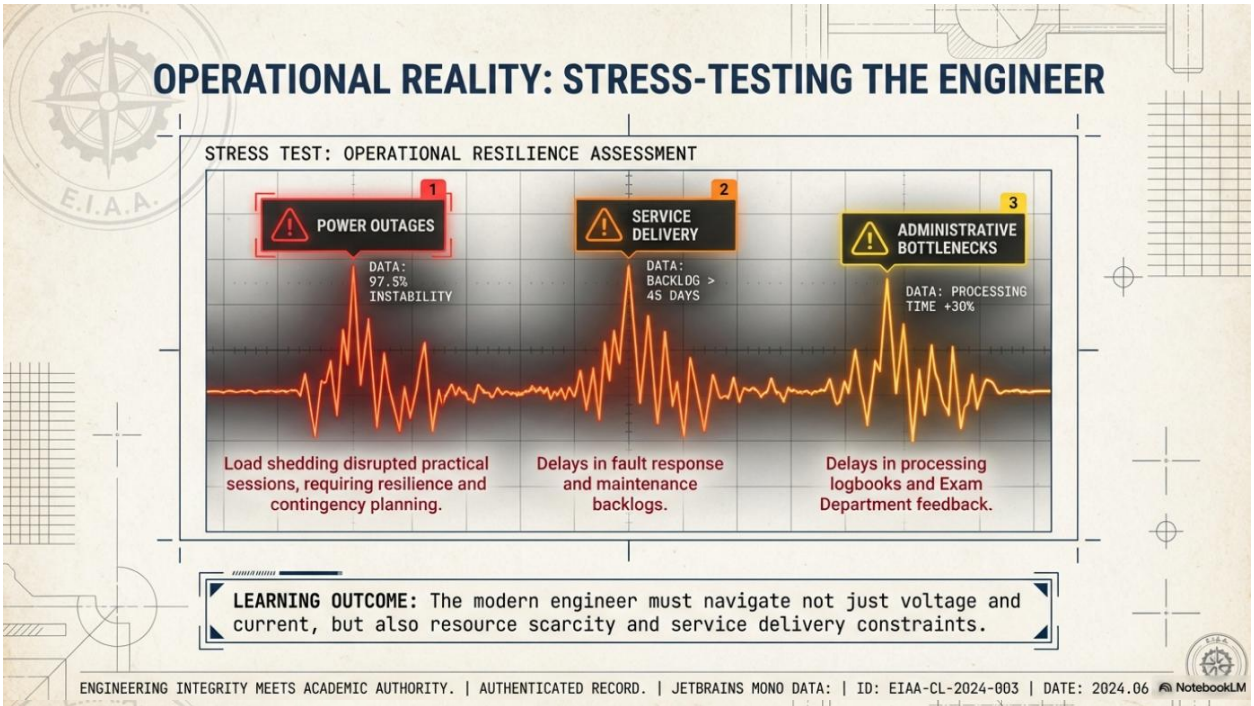
Comparing classroom Wiring Codes against actual SANS 10142-1 standards.

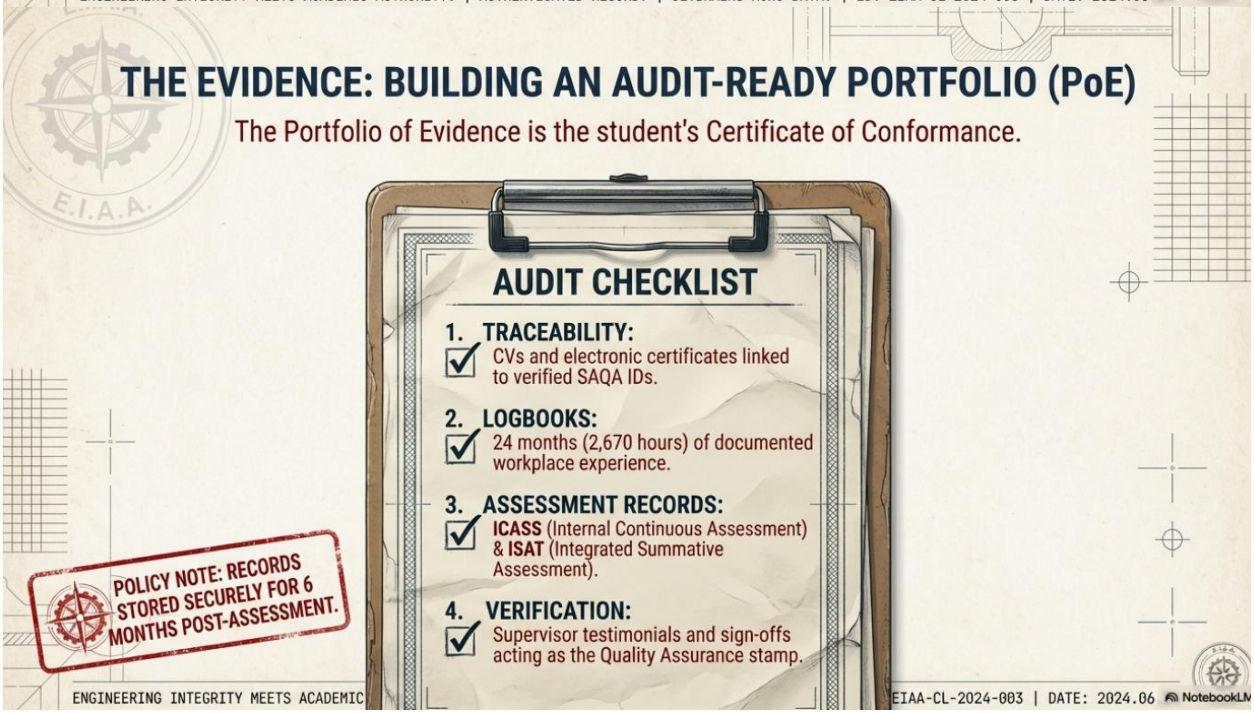
KEY INSIGHT

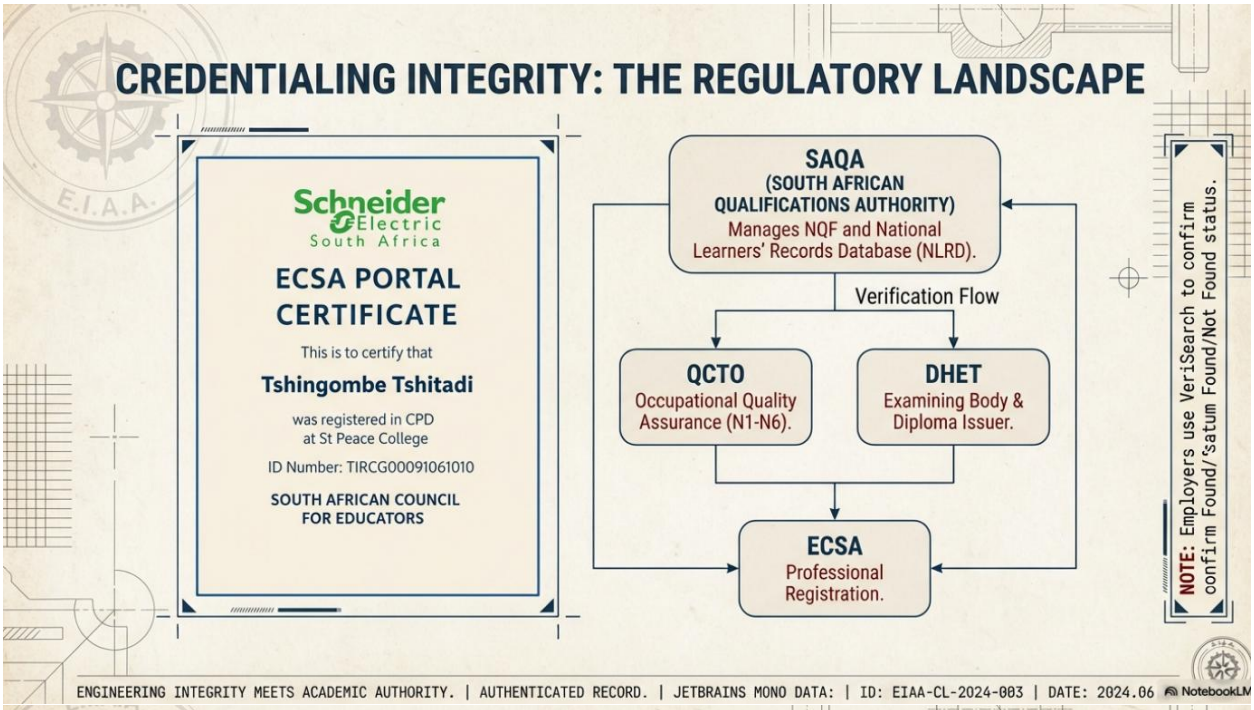
Moving from the Textbook environment to the Toolbox environment requires adaptability in fault reporting.

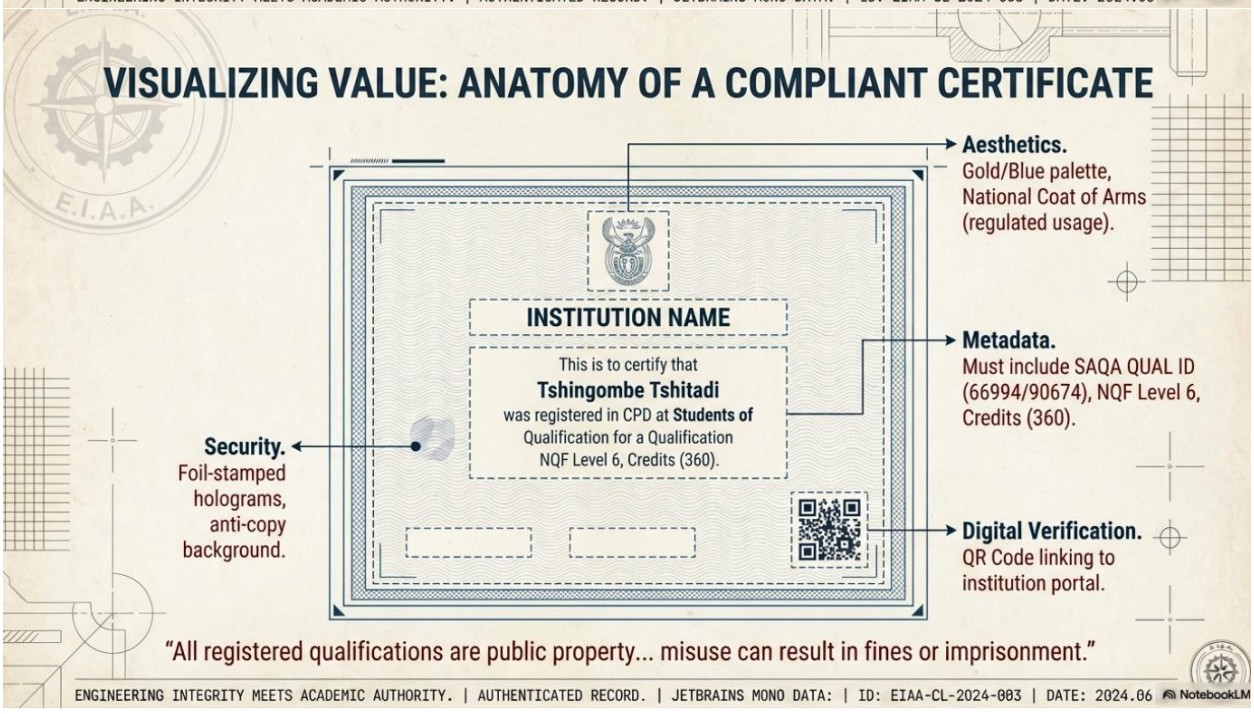
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-002 | DATE: 2024.06.23

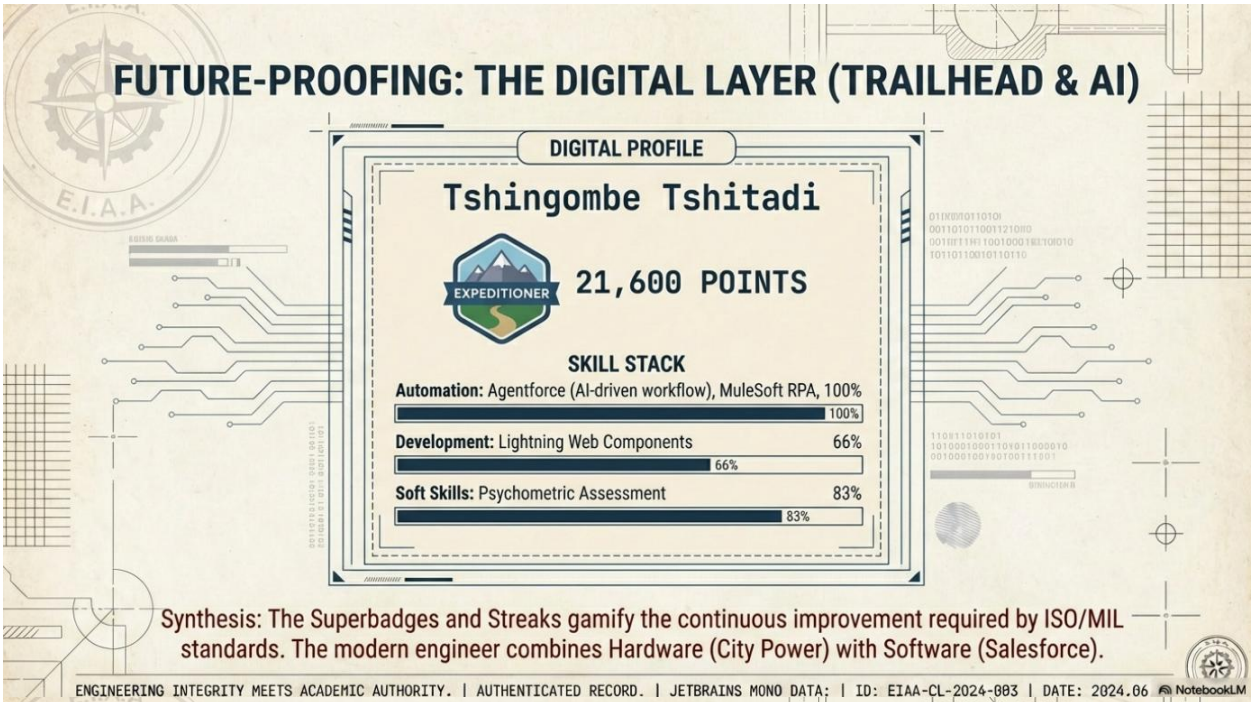
NotebookLM

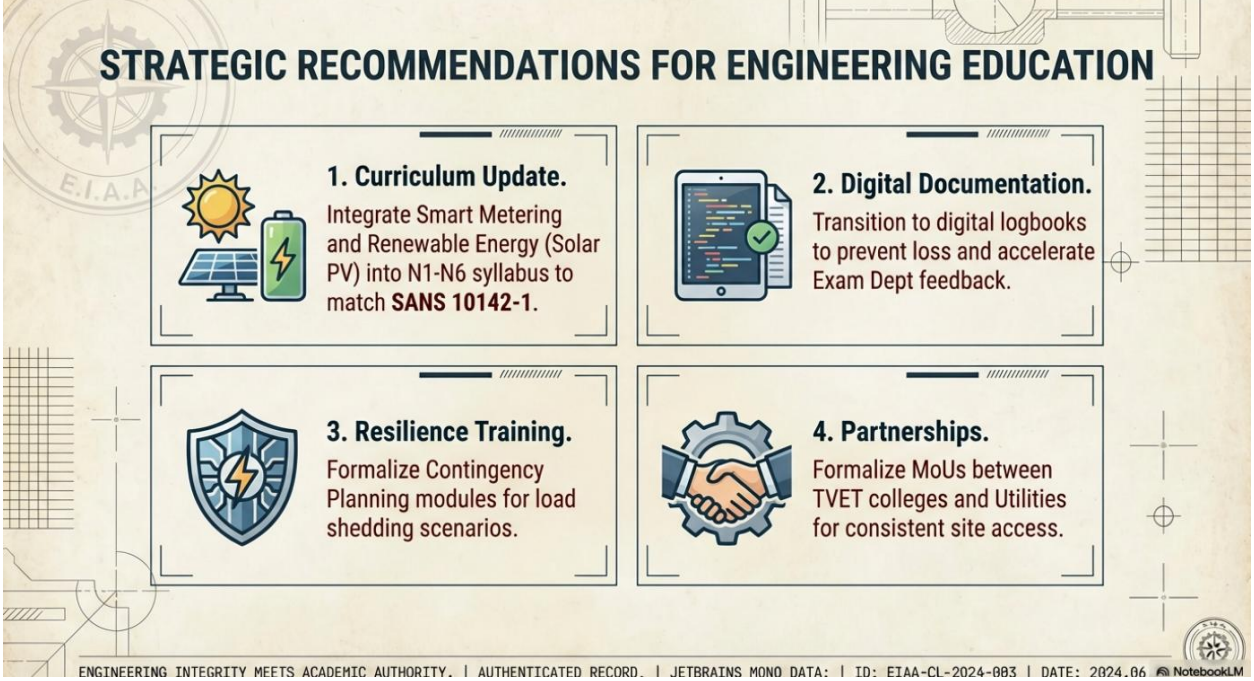

OPERATIONAL REALITY: STRESS-TESTING THE ENGINEER
STRESS TEST: OPERATIONAL RESILIENCE ASSESSMENT
1
POWER OUTAGES
DATA: 97.5% INSTABILITY
2
SERVICE DELIVERY
DATA: BACKLOG > 45 DAYS
3
ADMINISTRATIVE BOTTLENECKS
DATA: PROCESSING TIME +30%
Load shedding disrupted practical sessions, requiring resilience and contingency planning.
Delays in fault response and maintenance backlogs.
Delays in processing logbooks and Exam Department feedback.
LEARNING OUTCOME: The modern engineer must navigate not just voltage and current, but also resource scarcity and service delivery constraints.
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-003 | DATE: 2024.06
NotebookLM

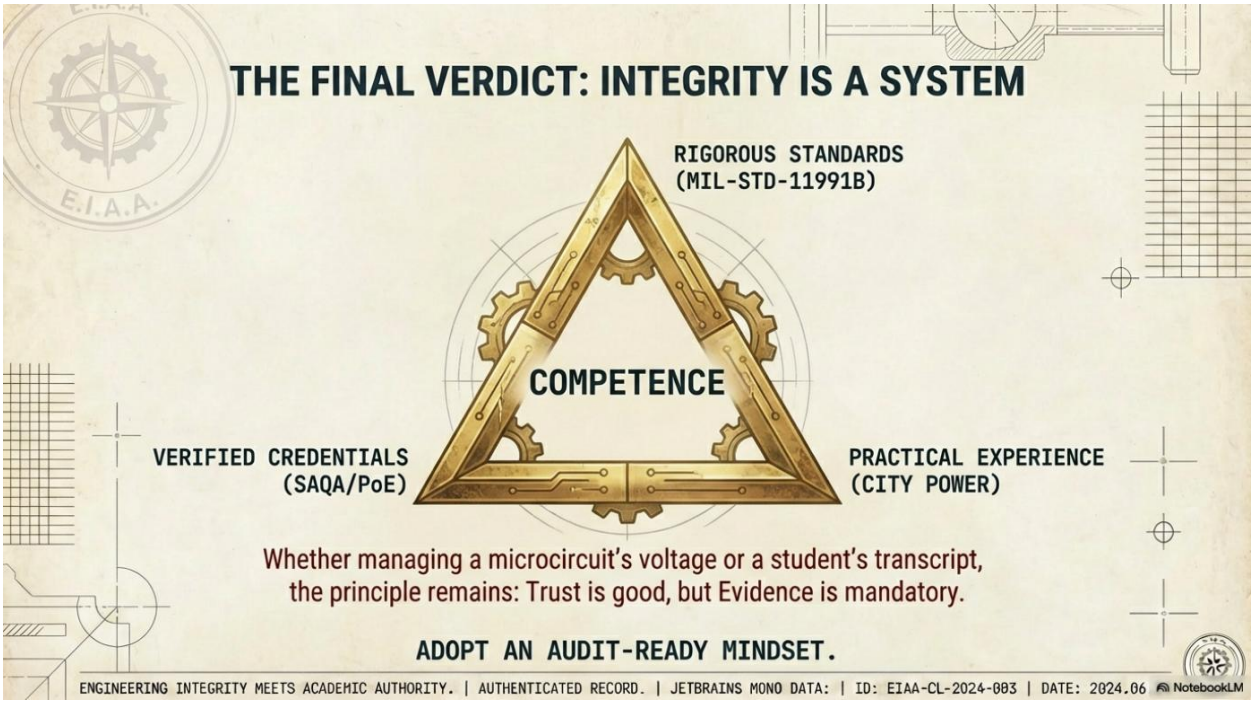

THE EVIDENCE: BUILDING AN AUDIT-READY PORTFOLIO (PoE)
The Portfolio of Evidence is the student's Certificate of Conformance.
AUDIT CHECKLIST
1. TRACEABILITY:
CVs and electronic certificates linked to verified SAQA IDs.
2. LOGBOOKS:
24 months (2,670 hours) of documented workplace experience.
3. ASSESSMENT RECORDS:
ICASS (Internal Continuous Assessment) & ISAT (Integrated Summative Assessment).
4. VERIFICATION:
Supervisor testimonials and sign-offs acting as the Quality Assurance stamp.
POLICY NOTE: RECORDS STORED SECURELY FOR 6 MONTHS POST-ASSESSMENT.
ENGINEERING INTEGRITY MEETS ACADEMIC
EIAA-CL-2024-003 | DATE: 2024.06
NotebookLM


CREDENTIALING INTEGRITY: THE REGULATORY LANDSCAPE
Schneider Electric South Africa
ECSA PORTAL CERTIFICATE
This is to certify that
Tshingombe Tshitadi
was registered in CPD at St Peace College
ID Number: TIRCG00091061010
SOUTH AFRICAN COUNCIL FOR EDUCATORS
SAQA
(SOUTH AFRICAN QUALIFICATIONS AUTHORITY)
Manages NQF and National Learners' Records Database (NLRD).
Verification Flow
QCTO
Occupational Quality Assurance (N1-N6).
DHET
Examining Body & Diploma Issuer.
ECSA
Professional Registration.
NOTE: Employers use VeriSearch to confirm confirm Found/Saturn Found/Not Found status.
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-003 | DATE: 2024.06
NotebookLM


VISUALIZING VALUE: ANATOMY OF A COMPLIANT CERTIFICATE
Aesthetics.
Gold/Blue palette, National Coat of Arms (regulated usage).
INSTITUTION NAME
This is to certify that
Tshingombe Tshitadi
was registered in CPD at Students of Qualification for a Qualification NQF Level 6, Credits (360).
Metadata.
Must include SAQA QUAL ID (66994/90674), NQF Level 6, Credits (360).
Security.
Foil-stamped holograms, anti-copy background.
Digital Verification.
QR Code linking to institution portal.
"All registered qualifications are public property... misuse can result in fines or imprisonment."
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-003 | DATE: 2024.06
NotebookLM


FUTURE-PROOFING: THE DIGITAL LAYER (TRAILHEAD & AI)
DIGITAL PROFILE
Tshingombe Tshitadi
EXPEDITIONER
21,600 POINTS
SKILL STACK
Automation: Agentforce (AI-driven workflow), MuleSoft RPA, 100%
100%
Development: Lightning Web Components 66%
66%
Soft Skills: Psychometric Assessment 83%
83%
Synthesis: The Superbadges and Streaks gamify the continuous improvement required by ISO/MIL standards. The modern engineer combines Hardware (City Power) with Software (Salesforce).
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-003 | DATE: 2024.06
NotebookLM


STRATEGIC RECOMMENDATIONS FOR ENGINEERING EDUCATION
1. Curriculum Update.
Integrate Smart Metering and Renewable Energy (Solar PV) into N1-N6 syllabus to match SANS 10142-1.
2. Digital Documentation.
Transition to digital logbooks to prevent loss and accelerate Exam Dept feedback.
3. Resilience Training.
Formalize Contingency Planning modules for load shedding scenarios.
4. Partnerships.
Formalize MoUs between TVET colleges and Utilities for consistent site access.
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-003 | DATE: 2024.06
NotebookLM


THE FINAL VERDICT: INTEGRITY IS A SYSTEM
RIGOROUS STANDARDS
(MIL-STD-11991B)
COMPETENCE
VERIFIED CREDENTIALS
(SAQA/PoE)
PRACTICAL EXPERIENCE
(CITY POWER)
Whether managing a microcircuit's voltage or a student's transcript,
the principle remains: Trust is good, but Evidence is mandatory.
ADOPT AN AUDIT-READY MINDSET.
ENGINEERING INTEGRITY MEETS ACADEMIC AUTHORITY. | AUTHENTICATED RECORD. | JETBRAINS MONO DATA: | ID: EIAA-CL-2024-003 | DATE: 2024.06
NotebookLM

Tshingombe Tshitadi:
A Profile in Engineering Education & Moderation

National N Diploma in Engineering

A qualification blending N4-N6 theory with 24 months of practical workplace experience.

Registered Assessment Moderator & Educator

Certified by SASSETA and registered with the South African Council for Educators (SACE).

Multi-Disciplinary Certifications

Holds credentials from the Council on Higher Education (CHE) and ECSA (Engineering Council).

Learner & Professional Profile

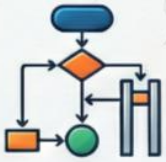
N4
Foundational Science & Industrial Electronics

N5
Electro-technics & Digital Electronics

N6
Supervisory Management & Control Systems

Focus on Electrical Trade Theory

Curriculum heavily weighted on DC Theory (30%) and Wiring (25%).



Governed by ICASS & National Exam Rules

Internal Continuous Assessment (ICASS) requires a 40% minimum to qualify for final exams.

Adherence to National Standards

Assessments and practices must comply with SANS 10142-1 for electrical installations.

The Educational & Assessment Framework

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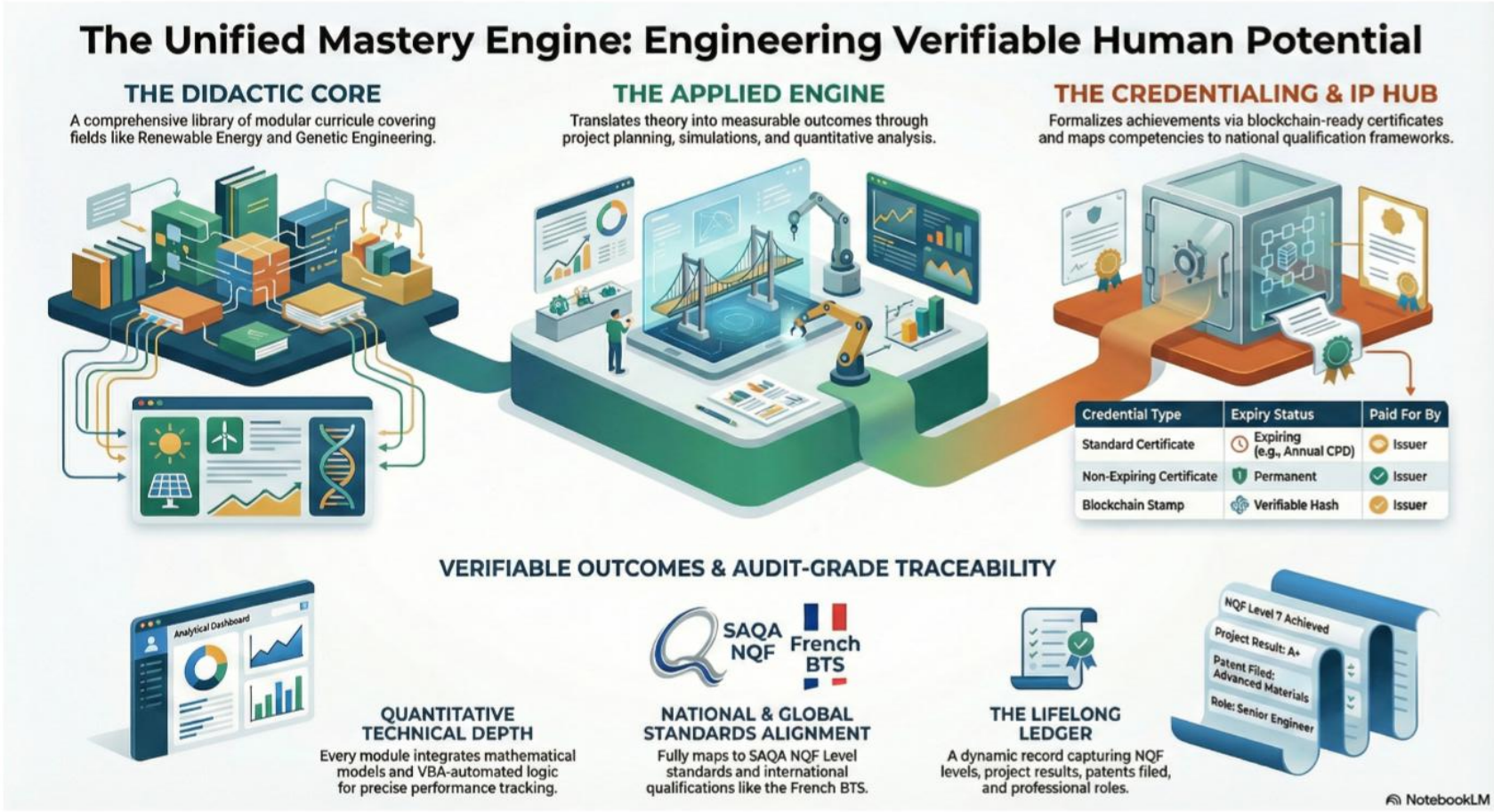

The Unified Mastery Engine: Engineering Verifiable Human Potential
THE DIDACTIC CORE
A comprehensive library of modular curricula covering fields like Renewable Energy and Genetic Engineering.
THE APPLIED ENGINE
Translates theory into measurable outcomes through project planning, simulations, and quantitative analysis.
THE CREDENTIALING & IP HUB
Formalizes achievements via blockchain-ready certificates and maps competencies to national qualification frameworks.
Credential Type
Expiry Status
Paid For By
Standard Certificate
Expiring (e.g., Annual CPD)
Issuer
Non-Expiring Certificate
Permanent
Issuer
Blockchain Stamp
Verifiable Hash
Issuer
VERIFIABLE OUTCOMES & AUDIT-GRADE TRACEABILITY
Analytical Dashboard
QUANTITATIVE TECHNICAL DEPTH
Every module integrates mathematical models and VBA-automated logic for precise performance tracking.
SAQA NQF
French BTS
NATIONAL & GLOBAL STANDARDS ALIGNMENT
Fully maps to SAQA NQF Level standards and international qualifications like the French BTS.
THE LIFELONG LEDGER
A dynamic record capturing NQF levels, project results, patents filed, and professional roles.
NQF Level 7 Achieved
Project Result: A+
Patent Filed: Advanced Materials
Role: Senior Engineer
NotebookLM

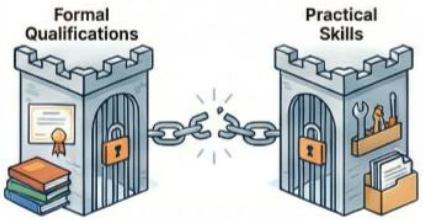
The Audit-Grade Career Engine: A Blueprint for Verifiable Competence

THE CHALLENGE: Fragmented Competence

Static and Unverifiable Data

Traditional resumes are self-reported and difficult for authorities to verify independently.

Disconnected Educational Silos



Formal quallfications and practical, hands-on skills rarely exist in the same database.

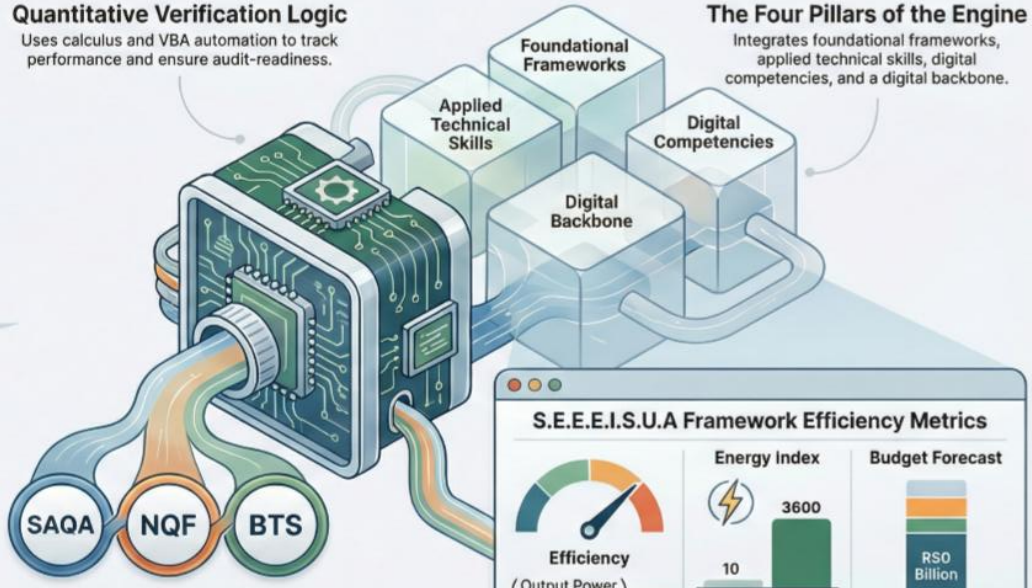
THE INTEGRATED SOLUTION: The Audit-Grade Career Engine

Quantitative Verification Logic

Uses calculus and VBA automation to track performance and ensure audit-readiness.

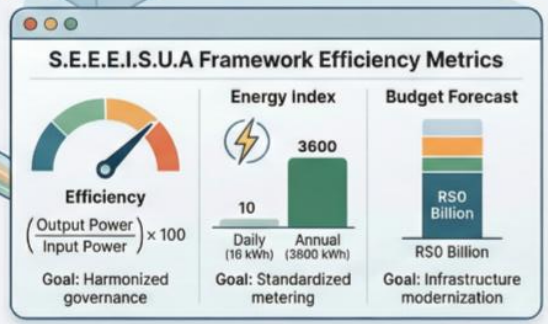
The Four Pillars of the Engine

Integrates foundational frameworks, applied technical skills, digital competencies, and a digital backbone.



Multi-Standard Alignment

Automatically maps local competencies to global standards like SAQA, NQF, and BTS.



NotebookLM